CONTENTS OF SUPPLEMENT.

PERSONAL 145
Obituary 145
ENGINEERING SOCIETIES. 145
Coming General Meetings 145
Coming Local Meetings 145
NEW PUBLICATIONS 146
Trade Publications 146
CONSTRUCTION NEWS:
Condensed List of Contracts Pending 147
Railways 147
Street and Electric Railways 147
Electric Light and Power 148
Bridges 149
Buildings 149
Water-Works 149
Irrigation 150
Sewerage 150
Garbage Disposal and Street Cleaning 150
Streets and Roads 150
Manufacturing Plants 150
Gas Plants 151
Miscellaneous Contracts 151
Contract Prices 151
INDUSTRIAL NOTES 152
New Companies 152

PERSONAL.

Mr. Cass Gilbert, of Minneapolis, Minn., has been appointed the architect of the new New York Custom House.

Mr. John King has been appointed Master Mechanic of the Chattanooga Southern R. R., to succeed Mr. H. T. Ellison, resigned.

Mr. Y. Van den Berg has been appointed First Vice-President of the Louisville & Nashville R. R., to succeed Mr. S. R. Knott, who has resigned.

Mr. Charles W. Ricker, of Buffalo, N. Y., has been appointed Consulting Electrical Engineer of the United States Securities Co., of Boston, Mass.

Mr. William H. Barnes, City Engineer, of Topeka, Kan., for the past eleven years, has resigned, and Mr. Platt L. Wise has been appointed to succeed him.

Mr. James Dun, Chief Engineer of the Atchison, Topeka & Santa Fe Ry., was married on Oct. 31 to Mrs. Rucker, daughter of Mr. and Mrs. William James, of St. James, Mo., and widow of Col. W. A. Rucker, U. S. Army.

Mr. G. W. Vaughan, M. Am. Soc. C. E., Chief Engineer New York, Chicago & St. Louis R. R., has resigned, it is stated, to take a similar position on a western road. Mr. E. E. Hart, who has been a division engineer under Mr. Vaughan, will succeed him as Chief Engineer.

Mr. L. G. Haas, Engineer of Maintenance of Way on the Erie & Ashtabula Division of the Pennsylvania lines, has been appointed Superintendent of that division, to succeed Mr. H. W. Byers. Mr. Byers is to become Superintendent of the Cleveland, Akron & Columbus Ry. Mr. H. W. Thornton will succeed Mr. Haas.

Mr. Charles A. Bunting, formerly of the Engineering Department of the Pennsylvania Steel Co., has been appointed Superintendent of Swarthmore College, to succeed Mr. William H. Hall. Mr. Bunting graduated from Swarthmore College in 1883, and has been engaged in civil engineering work since that time.

Maj. B. F. Dickson, U. S. V., has been appointed Superintendent of Government Railroads on the Island of Cuba, and will begin his new duties at once. Maj. Dickson has just completed the building of the new army barracks at Havana, which will accommodate eight regiments of infantry, eight troops of cavalry and one battery.

Mr. M. G. Howe, M. Am. Soc. C. E., has been appointed Engineer of Maintenance of Way of the Houston & Texas Central R. R., vice Mr. J. T. Mahl, resigned. Mr. Mahl still retains his position of Engineer of Maintenance of Way of the Southern Pacific Ry. and Superintendent of Construction of the new Southern Pacific extension.

OBITUARY.

Mr. George Napier, of the firm of Napier Bros., bridge contractors, died at his home near Franklinville, N. Y., on Oct. 22, aged 73 years.

Mr. John Elliott Moore, formerly a well-known railway engineer, died at his home at Lewiston, Me., on Oct. 29, at the age of 77 years. Mr. Moore's engineering work was done previous to 1876, since which time he had been engaged in business.

Mr. Samuel R. Smythe, of the firm of S. R. Smythe & Co., contracting and consulting engineers, of Pittsburg, Pa., died Oct. 27. Mr. Smythe was born in England in 1860, and was a graduate of Owen's College and Conway College, North Wales.

Mr. Thurlow Washburn, Assistant Superintendent, Liberty Bell Gold Mine, Telluride, Colo., was killed by a snow slide on Oct. 12, 1899, while making an attempt to visit during a heavy snow storm some work being done by the company in the mountains near Telluride. Mr. Washburn graduated from the Massachusetts Institute of Technology in 1897, where he took the course in mining engineering. He was 30 years of age at the time of his death.

Mr. Wm. Ellis Metford, Assoc. Inst. C. E., one of the noted designers of small-arms, died at Bristol, England, Oct. 14, at the age of 70. He made the first really successful and serviceable rifle, substituting shallow grooves for the troublesome deep grooves formerly used, and using a harder quality of lead for the bullet, to keep the lead from stripping. His rifle was more accurate at 1,000 yds. range than its predecessors were at 300 yds. Later, the breech mechanism invented by Mr. Lee, an American, was added, and the Lee-Metford rifle was very generally adopted for the British army.

Mr. William Smith, General Agent Seaboard Air Line, died at Raleigh, N. C., Oct. 30, aged 65 years. Mr. Smith began work as a civil engineer in Wilmington, N. C. In 1861 he was elected Master of Transportation of the Wilmington & Weldon R. R., which position he filled until 1872, when he went with the Wilmington & Manchester R. R., afterwards the Wilmington, Columbia & Augusta R. R. He superintended the building of that road between Sumter and Columbia in 1875. He then became connected with the Wilmington, Charlotte & Rutherford R. R., now the Carolina Central, and superintended the construction of that road from Lilesville to Monroe. Subsequently he became General Superintendent of the Raleigh & Gaston R. R., and afterwards also General Superintendent of the Raleigh & Augusta Air Line. His service with the two latter roads began about 1880, and he was in their service up to about three years ago, when he was made General Agent of the Seaboard Air Line, with hearquarters at Raleigh. The latter position he filled up to the time of his death.

Lieutenant-General Charles Wright Younghusband, retired, of the British army, died on Nov. 1. General Younghusband was born June 20, 1821, in Scotland, and after passing through the Royal Military Academy at Woolwich, joined the Royal Artillery in 1837. His knowledge of scientific subjects soon became evident to the authorities, and in 1840 he was sent to Canada, where he superintended the Magnetic and Meteorological Observatory in Toronto. He remained there for six years, and was then appointed as an assistant to Sir Edward Sabine, the President of the Royal Society, in reducing the magnetic and meteorological observations taken at the observatories at the Cape of Good Hope, Toronto, and other points. In 1854 General Younghusband took command of a company of the Royal Artillery at Gibraltar. The same year he was ordered with his company to the Crimea, and served with distinction throughout that campaign, receiving a medal with two clasps for his gallantry at the battle of Inkerman. Afterward he became Secretary of the Royal Artillery Institution, and from 1857 to 1863 he was employed in Belgium and Germany superintending contracts for small arms, bayonets, etc. In 1867 he was appointed Commissioner in charge of the British exhibit of war materials at the Paris Exhibition. From 1868 to 1875 he was Superintendent of the Royal Gunpowder and Gun Cotton Factory at Waltham Abbey, and from 1875 to 1880 he filled the post of Superintendent of the Royal Gun Factories at the Woolwich Arsenal. He was retired in 1890, and since then has devoted his time to writing contributions to magazines and military and scientific journals, and to scientific experiments of various kinds.

ENGINEERING SOCIETIES.

COMING GENERAL MEETINGS.

AMERICAN INSTITUTE OF ARCHITECTS.
Nov. 13 to 15. Annual meeting at Pittsburg, Pa. Secy., Glenn Brown, The Octagon, Washington, D. C.
RAILWAY SIGNALING CLUB.
Nov. 14. Annual meeting at Boston, Mass. Secy., C. O. Pilton, C., M. & St. P. R. R., West Milwaukee, Wis.
WATERWAYS CONVENTION.
Nov. 14 and 15. At Memphis, Tenn. Secy., George Skene, Memphis, Tenn.
KANSAS GAS, WATER AND ELECTRIC LIGHT ASSOCIATION.
Nov. 15 and 16. Fall meeting at Kansas City, Kansas. Secy., J. H. Foley, Leavenworth, Kansas.
NATIONAL MUNICIPAL LEAGUE.
Nov. 15 to 17. At Columbus, O. Secy., Clinton R. Woodruff, 514 Walnut St., Philadelphia, Pa.
SOCIETY OF NAVAL ARCHITECTS AND MARINE ENGINEERS.
Nov. 16 and 17. Annual meeting at New York. Secy., Francis T. Bowles, 12 West 31st St., New York city.
NEW JERSEY SANITARY ASSOCIATION.
Dec. 8 and 9. Annual meeting at Atlantic City, N. J. Secy., J. A. Exton, Arlington, N. J.
MICHIGAN ENGINEERING SOCIETY.
Jan. 2, 1900. Annual meeting at Kalamazoo, Mich. Secy., F. Hodgman, Climax, Mich.

COMING LOCAL MEETINGS.

CIVIL ENGINEERS' CLUB OF CLEVELAND.
Nov. 14. Secy., W. H. Searles, Case Library Bldg., Cleveland, O.
DENVER SOCIETY OF CIVIL ENGINEERS.
Nov. 14. Secy., W. B. Lawson, 36 Jacobson Bldg., Denver, Colo.
NEW ENGLAND RAILROAD CLUB.
Nov. 14. At Boston. Secy., Edw. L. Jones, P. O. Box 1158, Boston, Mass.
NORTHWEST RAILWAY CLUB.
Nov. 14. At Minneapolis. Secy., T. A. Fogue, Soo Line, Minneapolis, Minn.
AMERICAN SOCIETY OF CIVIL ENGINEERS.
Nov. 15. At New York. Secy., C. W. Hunt, 220 W. 57th St., New York city.
ENGINEERS' CLUB OF ST. LOUIS.
Nov. 15. Secy., Richard McCulloch, 2401 N. Spring Ave., St. Louis, Mo.
ENGINEERS' CLUB OF CINCINNATI.
Nov. 16. Secy., J. F. Wilson, P. O. Box 333, Cincinnati, O.
NEW YORK RAILROAD CLUB.
Nov. 16. At New York city. Secy., W. W. Wheatley, 168 Montague St., Brooklyn, N. Y.
CHICAGO ELECTRICAL ASSOCIATION.
Nov. 17. Secy., Cloyd Marshall, 1310 Monon Bldg., Chicago, Ill.
ENGINEERS' CLUB OF COLUMBUS.
Nov. 18. Secy., H. M. Gates, 12½ North High St., Columbus, O.
MONTANA SOCIETY OF CIVIL ENGINEERS.
Nov. 18. At Helena. Secy., Albert S. Hovey, Helena, Mont.
ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA.
Nov. 21. At Pittsburg. Secy., R. A. Fessenden, 410 Penn Ave., Pittsburg, Pa.
WESTERN RAILWAY CLUB.
Nov. 21. At Chicago. Secy., J. W. Taylor, 667 The Rookery, Chicago, Ill.
BOSTON SOCIETY OF CIVIL ENGINEERS.
Nov. 22. Secy., S. E. Tinkham, City Hall, Boston, Mass.
TECHNICAL SOCIETY OF THE PACIFIC COAST.
Dec. 1. At San Francisco. Secy., O. Von Geldern, 819 Market St., San Francisco, Cal.
ENGINEERS' SOCIETY OF WESTERN NEW YORK.
Dec. 4. At Buffalo. Secy., H. J. March, Library Bldg., Buffalo, N. Y.
AMERICAN SOCIETY OF MECHANICAL ENGINEERS.
Dec. 5. At New York. Secy., Francis E. Frothingham, 12 W. 31st St., New York city.
ENGINEERS' CLUB OF MINNEAPOLIS.
Dec. 7. Secy., H. E. Smith, 1020 S. E. 4th St., Minneapolis, Minn.
ST. LOUIS RAILWAY CLUB.
Dec. 8. Secy., H. H. Roberts, 511 Commercial Bldg., St. Louis, Mo.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—At the Juniors' monthly meeting, Nov. 7, a paper by Fred. H. Colvin, Jr. M. Am. Soc. M. E., on "Compound Locomotives" was read by Prof. Hutton, of Columbia University. The paper described the mechanism of the different types manufactured in this country, and was illustrated by lantern slides.

AMERICAN SOCIETY OF CIVIL ENGINEERS.—The meeting on Nov. 1 was devoted principally to the reading and discussion of a paper on "Test of a Mechanical Filter," by Mr. Edmund B. Weston, M. Am. Soc. C. E., of Providence, R. I. The discussion is given in the body of this number. The secretary announced that the Board of Direction had decided that the next summer convention of the society would be held in London. It was felt that the members would receive more attention and secure better hotel accommodations there than could be expected in Paris at the time of the Exposition.

RAILWAY SIGNALING CLUB.—The annual meeting of the Railway Signaling Club will be held Nov. 14, at Young's Hotel, Boston, Mass., when the election of officers will take place, and the following papers will be read: "Progress in Signaling," H. M. Sperry, Union Switch & Signal Co.; "Automatic Signaling—Normal Safety vs. Normal Danger," A. J. Wilson, Hall Signal Co.; "Possibilities of Three-Position Signaling," Frank Rhea, Pennsylvania R. R. On Nov. 15 the club will visit the new South Union Station and inspect the electro-pneumatic interlocking and signaling system, by invitation of Mr. John C. Sanborn, Manager of the Boston Terminal Co.

WATERWAYS CONVENTION.—The executive committee on improvement of western waterways has issued a call for a convention to meet at Memphis, Tenn., Nov. 14 and 15. The chief object of the convention is to get government aid through congressional enactments for river improvements. A very important matter for rivermen of the Mississippi district will be the discussion of the improvement of that river from a point near the upper rapids, with the end in view of getting slack-water systems provided. Another thing which will be considered is a better channel between St. Louis and Cairo, and at the same time better harborage along the river between those cities. The question of governmental control of all the levees along the lower Mississippi will also be discussed. As the matter stands at present, the levees are controlled in most cases by the cities or private individuals, and trouble between city governments and rivermen is the result. The channel at the mouth of the river is under corporate control by a contract calling for a depth of only 26 ft., which amount of water is inadequate for the larger heavily-laden ocean vessels.

INTERNATIONAL CONGRESS OF RAILWAYS.—The sixth congress will meet at Paris, Sept. 15, 1900. The subjects to be discussed are:

Ways and Works.—Nature of metal for rails; rail joints; points and crossings; maintenance of way on lines with heavy traffic; methods of dealing with snow; construction and tests of metallic bridges; transition from a rising to a falling gradient; preservation of timber; ballast; creeping of rails.

Locomotives and Rolling Stock.—Exhaust and draft in locomotives; locomotives for trains run at very high speed; stability of locomotive axles; banking, piloting or double heading; purification of feed water of locomotives and use of disincrustants; use of steel and ingot iron in construction of locomotives and rolling stock; brakes and couplings of carriages and wagons; economical size of goods trucks or capacity of freight cars; electric traction; automotor vehicles.

Traffic.—Train lighting; handling and conveyance of broken loads; long-distance goods trains; economical interlocking apparatus; automatic block system; signals for repeating visible signals; use of the telephone; safety appliances for preventing collisions arising from runaway wagons; sorting by gravitation; distribution of rolling stock.

General.—Accounts; railway clearing houses; grouping of goods; technical education of railway servants—appointment and promotion; co-operative societies and stores under railway management; facilities for customs inspection.

Light Railways.—Influence of light railways on national wealth; means of developing; main lines crossed by light railways; conveyance of farm produce to stations; carriages and wagons for light railways; warming of carriages.

Reports from United States representatives will be made in regard to nature of metals for rails, ballast, exhaust and draft in locomotives, locomotives for high speed trains, use of steel and ingot iron in the construction of locomotives and rolling stock, brakes and couplings, capacity of freight cars, electric traction, conveyance of broken loads, automatic block system, railway clearing house, technical education of railway servants, and conveyance of farm produce to stations on the main railways.

Other matters which will be discussed are: Use of liquid fuel in locomotives, international passenger fares and goods traffic, suburban passenger traffic, organization of funds for providing pensions to employes, and benefit societies of Russian railways (old age pensions, sick and accident funds, mutual loan arrangements, etc.).

The United States government has been invited to send delegates to the congress.

INTERNATIONAL MINING CONGRESS.—The third annual session of the congress will be held June 19 to 23, 1900, at Milwaukee, Wis.

This congress will not confine its consideration alone to gold and silver and their by-products, but will consider

iron, coal, marble, stone, the various fire-clays, asphaltum and all kindred interests of the mineral and metallic industries. Its objects are: To secure better recognition of the mining industry by the national government; to bring about needed changes in the federal mining laws; to cultivate acquaintance, fraternal feeling and hearty co-operation among the various mining, manufacturing, transportation, commercial and labor bodies represented; to exchange practical ideas covering the various phases of the mining business, an interest embracing every branch of the mining industry and which affects more than one-third of the people of the United States, producing in 1898 eight hundred million dollars.

Proposals are invited of subjects and papers on mines, mining, milling, mining machinery and kindred topics to be embraced in the programme now being prepared, and on adjournment of the congress to be published with its proceedings in book form.

Governors of states and territories, all friendly nations, mayors of cities and towns, mining exchanges, chambers of commerce, boards of trade, real estate exchanges and all commercial, trade and labor organizations are urged to appoint representative delegates at an early date, sending the name and post-office address of each delegate to the secretary. The basis of representation will be as follows: The governor of each state and territory to name 30 delegates at large; the county commissions of each county to name 5 delegates at large; the mayor of each city and town to name 5 delegates at large. One additional to be named in each case above for each 10,000 population or fraction thereof. Each mining bureau to name 5 delegates; each mining exchange to name 5 delegates; each real estate exchange to name 5 delegates; each chamber of commerce to name 5 delegates; each board of trade to name 5 delegates; each miners' union to name 5 delegates; each trade and labor assembly to name 5 delegates. All other commercial bodies to name 5 delegates. Irwin Mahon, Acting Secy.

MICHIGAN ENGINEERING SOCIETY.—At the annual meeting of the Board of Directors of the society, held at Lansing, Sept. 20, 1899, the following persons were elected officers of the society for the ensuing year: President: J. J. Hubbell, of Manistee; Vice-President, H. E. Riggs, of Toledo; Secretary and Treasurer, F. Hodgman, of Climax; Directors, Dorr Skeels, of Grand Rapids; A. J. Teed, of Cadillac; and H. K. Vedder, of Michigan Agricultural College. It was decided to hold the next annual convention at Kalamazoo, commencing Jan. 2, 1900. Papers for the convention are promised on: "Placer Mining on Douglass Creek, Wyoming," by H. G. Rothwell; "Pure Water for Michigan Cities," A. L. Holmes; "How to Make a Good Road," A. J. Teed; "Brick and Asphalt Paving," H. E. Riggs and F. F. Rogers; "Modern Power Plants for Manufacturing Purposes," B. E. Parks; "The Ohio Centennial Exposition," W. J. Sherman; "Water-Works Management," W. W. Brigden; "Sinking a Water-Works Well," E. W. Muenscher; "The Allegan Dam," J. C. Riley; "Hydraulic Formulae," M. E. Sullivan; "Economic Geology of Lower Michigan," A. C. Lane; "Grand Rapids Public Works," Geo. M. Ames; "Authority of the County Surveyor to Make Original Surveys," C. A. Ensign; "Land Grants in the United States," R. W. Hawley. Other papers, the titles of which are not yet announced, are promised by Professor C. L. Weil, C. W. Hubbell, Geo. E. Steele and M. H. Bailey. It is also hoped to have a paper from Professor M. E. Cooley, on "The Uses of Compressed Air."

The following standing committees are expected to make reports: "To Prepare Model Ordinance for Regulating the Franchise of Electric Street Railways," H. E. Riggs, E. W. Muenscher and J. J. Granville; "On Forestry," F. E. Skeels, Chas. Holmes and A. J. Teed; "On the Relation of Sewerage and Water Supply to the Public Health," F. F. Rogers, Geo. S. Pierson and E. L. Dunbar; "On Materials for Street Paving," Geo. M. Ames and Dorr Skeels; "On Advertising," Geo. L. Wells, M. Walker, B. E. Parks, A. L. Holmes and Chas. Holmes. Reports are also expected from the following special committees: "To Investigate Fillers for Brick Pavements," J. J. Granville and Geo. M. Ames; "On Clark Monument," Dorr Skeels, Geo. M. Ames and J. L. Rumsey.

F. Hodgman, Secy., Climax, Mich.

OHIO VALLEY IMPROVEMENTS ASSOCIATION.—The following is an abstract of the resolutions adapted at the recent Louisville convention:

We urge such additional appropriations by Congress as will insure continuous work until regular and reliable navigation is secured on the Ohio River, and that a sufficient amount be appropriated for a survey of the Ohio River with a view to the construction of locks and dams to secure uninterrupted navigation to the mouth of the river at Cairo. The respective states and municipalities bordering on the river and Congress are asked to enact such legislation as will relieve the steamboat interests from the excessive wharfage charged by the various towns and cities along the river. The method adopted in late years by Congress of placing important works under the continuous contract system is endorsed. In the improvement in the Ohio River between Pittsburg and Marietta, for which surveys have been made and plans adopted by the United States Board of Engineers, it is the judgment of this convention that such of the dams not yet authorized to be placed under continuous contract, and contemplated by those plans, should be so authorized, and constructed at such points as will enable boats to pass certain points which are now serious obstacles to navigation.

We protest against the continued encroachments upon the channel way of the Ohio River, which render navigation difficult and hazardous, and urge upon Congress the imperative necessity of preventing all such encroachments.

When the Ohio River improvement has been made upon the plan recommended by the United States Engineers to the mouth of Salt River, Ky., we are in favor of the improvement of Salt River as recommended by the Chief of Engineers of the United States in Congress in H. Doc. 184-50 Cong. 1st Session.

The engineers in charge of the survey of the valley of the Big Sandy River having favorably reported upon the construction of a series of locks and dams for said waterwork, we urge that Congress at its next session take such action as may be necessary to carry out the recommendations of the engineers.

We urge Congress, at its next session, to appropriate the necessary funds for the opening of a channel of at least 35 ft. depth through the south pass of the Mississippi to the gulf.

For purposes of harborage in the Ohio River, there is a necessity for the creation of slack water in the Ohio which will connect with the system already established in the Great Kanawha. Congress is petitioned to provide for immediate construction of a lock and movable dam below Gallipolis to accomplish this purpose.

The building of an Isthmian canal by the United States is urged.

We recommend that immediate provision be made for the construction of a dam at or below Cullum's Riffle, to insure in the harbor of Cincinnati, Covington and Newport not less than six feet of water at low water stage.

A large amount of money has been spent on the Louisville and Portland canal, and, while the canal is in good shape, the approach at the foot of the canal is dangerous, and entrace has to be made by a circuitous route. A straight channel should be made from the present guard wall to the K. & I. bridge pier, the estimated cost of which is $12,000.

It will soon be necessary to reconstruct the dam at the head of the falls at Louisville, Ky., and as the navigation of the Ohio River in the pool above the falls would be greatly benefited by three or four feet greater depth of water, Congress is asked to provide for this by making the dam higher when it is rebuilt.

Congress is asked to make a continuous appropriation of $75,000 per year for dredging the main channel of the Ohio River.

NEW PUBLICATIONS.

DER DORTMUND-EMS-KANAL UND DAS SCHIFFSHEBEWERK BEI HENRICHENBERG.—Zeitschrift des Vereines Deutscher Ingenieure, Aug. 12, 1899. Pp. 40; illustrated.

This is a very complete and well-written description of the new canal recently completed between Dortmund and Ems in Germany, the most important structure on which is the lift lock at Henrichenburg. This lock is described in detail.

ETUDES SUR LA CONSTITUTION DES CIMENTS HYDRAULIQUES.—Par O. Rebuffat, Dr. Professeur de Chimie Ecole Royale des Ingenieurs Naples. Traduit de l'Italien. Journal de l'Association Internationale pour l'Essai des Materiaux. Nos. 12-17, 1899.

This is a comprehensive study of the chemical constitution of hydraulic cements, treating particularly of the chemical reactions which accompany the setting of this material.

PROCEEDINGS MASTER CAR BUILDERS' ASSOCIATION.—Mr. Joseph W. Taylor, 667 The Rookery, Chicago, Secretary. Cloth; 6 x 9 ins.; pp. 511; illustrated.

This is a complete report of the proceedings at the annual convention of the association, held at Old Point Comfort, Va., June 14, 15 and 16, 1899. Besides the current convention proceedings the report contains, as usual, the text, tables and drawings showing the standard and recommended practice of the association in all the details of car construction and operation for which they have been established.

THE BACTERIAL TREATMENT OF CRUDE SEWAGE.—Experimental Intermittent Treatment of London Crude Sewage in the Coke Beds of Crossness. Reported by Prof. Frank Clowes, Chief Chemist to the London County Council, and Dr. A. C. Houston, Bacteriologist. London: P. S. King & Son, Agents to the Council, 2 Great Smith St., Westminster, S. W. Paper; 8 x 13 ins.; pp. 41; tables, plates and folding sheets of diagrams. 2 shillings in England, 80 cts. in the United States.

This report is abstracted elsewhere in this issue. It is the second one on the same general subject, the first one being devoted almost wholly to the bacterial contents of London sewage.

TRADE PUBLICATIONS.

(The standard sizes for pamphlets and trade catalogues recommended by all the principal engineering societies of the United States are: 3½ x 6 ins., 6 x 9 ins., and 9 x 12 ins.)

GRAPHITE.—Joseph Dixon Crucible Co., Jersey City, N. J. Paper; 5½ x 7 ins.; pp. 19; illustrated.

This pamphlet discusses the use of graphite for the lubrication of engine valves and cylinders.

FLEXIBLE CONDUIT.—Sprague Electric Co., 20 Broad St., New York city. 3 x 5½ ins.; pp. 16; illustrated.

This is a book of instructions for the proper installation of the flexible metallic conduit made by the above company.

RUBBER GOODS.—Boston Belting Co., Boston, Mass. Paper; 3½ x 6 ins.; pp. 24, illustrated.

This booklet describes the various rubber goods manufactured by the above company, including belting, hose, packing, tubing, etc.

STEAM THRESHING MACHINERY.—The Marion Mfg. Co., Marion, O. Paper; 6 x 9 ins.; pp. 32; illustrated.

The contents of this book comprise traction engines, portable steam engines, agricultural separators, stackers, band cutters, horse-powers, pony saw-mills, etc.

MACHINISTS' TOOLS.—Brown & Sharpe Mfg. Co., Providence, R. I. Paper; 6 x 9 ins.; pp. 148; illustrated.

This is catalogue and price list No. 101 of the above company, describing machinists' tools and measuring instruments of various kinds for use in the machine shop.

PNEUMATIC TOOLS.—International Pneumatic Tool Co., Ltd., London, England. Paper; 9½ x 6 ins.; pp. 39; illustrated.

This catalogue illustrates and describes the various kinds of pneumatic tools made by the above-named company.

TELEPHONE APPARATUS AND SUPPLIES.—Illinois Electric Co., 239 Madison St., Chicago, Ill. Cloth; 7½ x 10½ ins.; pp. 115; illustrated.

This is catalogue No. 10 of the above company, covering a complete line of telephone apparatus, supplies and construction material.

DRAWING INSTRUMENTS.—Theo. Alteneder & Sons, 945 Ridge Avenue, Philadelphia, Pa. Boards; 7½ x 3 ins.; pp. 110; illustrated.

This is a very complete and handsomely printed and illustrated catalogue and price-list of everything needed by the draftsman in the way of instruments.

GAS AND GASOLINE ENGINES.—Witte Iron Works Co., Kansas City, Mo. Paper; 9 x 6 ins.; pp. 32; illustrated.

The Witte engine is of the horizontal type, with valves in the cylinder head. In addition to ordinary stationary work it is shown as a portable farm engine, and also as applied to a hoisting plant.

ENGINES.—Buffalo Forge Co., Buffalo, N. Y. Paper; 6½ x 3½ ins.; illustrated.

This is a folder describing some of the most recent engines turned out by the above company. A tandem compound center crank engine is shown which embraces some new departures in design and construction.

MULTIPOLAR D. C. MOTORS.—Bullock Electric Mfg. Co., Cincinnati, O. Paper; 6 x 9 ins.; pp. 40; tables and illustrations.

This is Bulletin No. 0335 of the above company describing their direct current multipolar motors designed for belt or direct connection to machinery in shops and mills.

GASOLINE ENGINES.—Waterloo Gasoline Engine Co., Waterloo, Ia. Paper; 9½ x 6 ins.; pp. 20; illustrated.

The Waterloo engine is of both vertical and horizontal, single cylinder, center crank types, and is used to drive pumps, dynamos and general machinery. A portable engine and a traction engine are also shown.

GAS AND GASOLINE ENGINES.—Pierce-Crouch Engine Co., New Brighton, Pa. Paper folder; 7 x 4 ins.; illustrated.

This folder illustrates single cylinder gas engines direct connected to electric generators and made by the company named. One of the types illustrated is built after the "straight line" pattern.

AUTOMATIC LUBRICATION.—Siegrist Lubricator Co., St. Louis, Mo. Paper; 10 x 12 ins.; pp. 32; illustrated.

This is a well printed and illustrated pamphlet describing the automatic oiling system manufactured by the above company. Half-tone views are given showing plants where the system is now installed, together with testimonials from the users.

MACHINE TOOLS.—Warner & Swasey, Cleveland, O. Paper; 4½ x 6½ ins.; pp. 84; illustrated.

The machine tools for iron and brass work, made by this firm, are illustrated and described in this pamphlet. Complete specifications are given of all machines. The book concludes with a number of useful tables and a set of rules for laying out spur, bevel and worm gearing.

INTERIOR DECORATIONS.—The Kinnear & Gager Co., Columbus, O. Paper; 8¾ x 11¾ ins.; pp. 48; illustrated.

This pamphlet describes and illustrates the stamped steel ceilings, side wall decorations, wainscoting, steel rolling shutters, doors and partitions, etc., which are made by this company. Directions for erection are also given.

ROLLER GRINDING MILL.—Raymond Bros. Impact Pulveriser Co., 1402 Monadnock Block, Chicago, Ill. Paper; 6 x 9 ins.; pp. 16; illustrated.

This machine has vertical shaft with a horizontal revolving head fitted with mushroom-headed rolls, as recently described in our columns. It is designed for fine grinding at slow speed, and is used for lime, marble, cement, etc.

BRIDGE FLOORS.—The Youngstown Iron & Steel Roofing Co., Youngstown, O. Paper; 8 x 5½ ins.; pp. 20; illustrated.

This pamphlet describes the steel corrugated trough floor for bridges which is made by the company named. Records of tests of this form of floor are given and a number of structures in which it has been used are shown by illustrations.

WELL DRILLING MACHINERY.—Kelly & Taneyhill, Waterloo, Ia. Paper; 7¾ x 10 ins.; pp. 56; illustrated.

This is a descriptive catalogue and price-list of well drilling machinery, including steam, horse and hand power drilling rigs, and the various appliances, tools and supplies used in the work. The larger rigs will drill wells 3,000 ft. deep. A stone puller, for removing bowlders from farm lands, etc., is also shown.

SEAMLESS STEEL TUBE BICYCLE PARTS.—The Standard Welding Co., Cleveland, O. Paper; 6 x 9 ins.; pp. 12; illustrated.

This company is the successor of the seamless steel tubing, electric welding of bicycle parts and general welding business of the Standard Tool Co., Cleveland, and this pamphlet describes its line of work. Illustrations of various parts of bicycle frames are given with details.

BALL BEARINGS.—The Ball Bearing Co., Boston, Mass. 4½ x 7 ins.; pp. 36; illustrated.

This pamphlet contains illustrations and descriptions and tables of sizes of roller journal bearings and ball thrust bearings made by the above-named company. A clear presentation is given of the designs manufactured, which will be of value to those engineers and designers who have occasion to employ anti-friction devices in their work.

BALDWIN LOCOMOTIVES.—The Baldwin Locomotive Works, Philadelphia, Pa. Paper; 9 x 6 ins.; pp. 32; illustrated.

Premonitions of the coming Paris Exposition appear in this pamphlet, which is printed in both English and French. It describes a variety of locomotives built to both American and foreign orders, including a brief description and a half-tone picture of the locomotive "Philadelphia," furnished the Birmingham & Gloucester Ry., of England, in 1840, and of a modern mogul locomotive built for the Midland Ry., of England, in 1899.

GAS AND GASOLINE ENGINES.—Davis Gasoline Engine Works Co., Waterloo, Ia. Paper; 9¾ × 6½ ins.; pp. 16; illustrated.

The Davis engine is horizontal, and has vertical poppet valves. Large numbers are said to be in use for driving pumps and electric light plants and for general power purposes. Well pumps may be driven from pulleys on a steel tower, driven by rope transmission from the engine. A portable engine is manufactured.

DIRECT CURRENT GENERATORS.—Sprague Electric Co., 20 Broad St., New York city. Paper; 7 × 9 ins.; pp. 36; tables and illustrations.

This is catalogue No. 64 of the above company describing the Lundell generator. One of the special features of this generator is that the pole tip pointing in the direction of rotation of the armature is provided with a long shoe, which serves to secure a suitable field for commutation at all loads. Curves are given showing the distribution of potential around the commutator, both when the machine is running in the right and wrong directions.

TWIST DRILLS AND REAMERS.—The Standard Tool Co., Cleveland, O. Paper; 3 × 5½ ins.; pp. 24; illustrated.

This pamphlet describes the line of goods made by this company, consisting of twist drills, reamers, spring cotters, flat spring and riveted keys and special tools. Tables are given showing the different sizes of drills made by the company. Tables are given showing gages of drills and wire, speed of drills, dimensions of standard pipe, pitch and diameter of screws, weight of bar steel, decimal equivalents of gage sizes, etc. Blank pages for notes alternate with the printed pages.

IRON, WIRE AND ARTISTIC METAL WORK.—The Columbia Iron & Wire Works Co., Canton, O. Paper; 7¾ × 10¾ ins.; pp. 60; illustrated.

This company, which is the successor of J. E. Raber & Co., illustrates in this book its line of architectural iron, wire and brass work, including elevator cabs and inclosures, bank and office railings, stable fixtures, lawn furniture, wrought iron fencing, sheet metal work, etc. Other special features comprise vault and cemetery gates, grilles, iron stairs and railings, fire escapes, window guards, fireproof shutters and doors, sand and coal screens, finials and crestings, etc.

CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING WITH DATE OF OPENING BIDS.

Bids to be opened	Work.	Place.	See Eng. News.
Nov. 9.	Canal work, Albany, N. Y.		Nov. 2
	Advertised, Engineering News, Nov. 2.		
Nov. 10.	Cylindorama, Chicago, Ill.		Nov. 2
Nov. 10.	Life boat wagons, New York, N. Y.		Nov. 2
Nov. 11.	State building plans, Sacramento, Cal.		Oct. 26
Nov. 11.	Road (95 miles), Cleveland, Tenn.		Oct. 26
	Advertised, Eng. News, Oct. 26 and Nov. 2.		
Nov. 11.	Public baths, Birkenhead, England.		Oct. 26
Nov. 13.	Water-works, Muskogee, Ind. Ter.		Oct. 26
	Advertised, Eng. News, Oct. 26 and Nov. 2.		
Nov. 13.	Dredging, Boston, Mass.		Oct. 12
	Advertised, Eng. News, Oct. 12 to Nov. 2.		
Nov. 13.	Electric wiring, West Point, N. Y.		Oct. 19
	Advertised, Eng. News, Oct. 19 to Nov. 2.		
Nov. 13.	Canal, Chicago, Ill.		Oct. 19
	Advertised, Eng. News, Oct. 19 to Nov. 9.		
Nov. 13.	School buildings, New York, N. Y.		Nov. 2
Nov. 13.	Furnishing metal, New Haven, Conn.		Nov. 2
	Advertised, Engineering News, Nov. 2.		
Nov. 13.	School buildings (2), Philadelphia, Pa.		Nov. 9
Nov. 13.	Macadamizing, Boston, Mass.		Nov. 9
Nov. 13.	Electric lighting, Columbus, S. C.		Nov. 9
Nov. 14.	Sewers, Jersey City, N. J.		Nov. 9
Nov. 14.	Paving, League Island Navy Yard, Pa.		Nov. 9
Nov. 14.	Asphalt paving, New York, N. Y.		Nov. 2
Nov. 14.	Traveling crane, London, England.		Nov. 2
Nov. 14.	Dredging, Montgomery, Ala.		Oct. 19
	Advertised, Eng. News, Oct. 19 to Nov. 9.		
Nov. 14.	Dredging, Apalachicola Bay, Fla.		Oct. 19
	Advertised, Eng. News, Oct. 19 to Nov. 9.		
Nov. 14.	Bridge, Alameda, Cal.		Sept. 21
	Advertised, Eng. News, Sept. 21 to Oct. 12.		
Nov. 14.	Engines (tramway), Glasgow, Scotland		Oct. 26
Nov. 15.	Sewer work, Morecambe, England		Oct. 26
Nov. 15.	Water pipe (7,200 ft.), Glenville, O.		Oct. 26
Nov. 15.	Bonds, Hyde Park, O.		Oct. 26
Nov. 15.	Sand and cement, Chicago, Ill.		Oct. 26
Nov. 15.	Sewer brick (3,120,000), Chicago, Ill.		Oct. 26
Nov. 15.	Steel bridge, Ozark, Ark.		Oct. 26
Nov. 15.	Electric plant, Holoke, England.		Oct. 26
Nov. 15.	Dredging, Galveston, Tex.		Oct. 19
	Advertised, Eng. News, Oct. 19 to Nov. 9.		
Nov. 15.	Levee, New Orleans, La.		Oct. 19
Nov. 15.	Water-works, Bainbridge, Ga.		Nov. 2
Nov. 15.	Water bonds, Sardis, Miss.		Nov. 2
Nov. 15.	Water-works, Bodmin, England.		Nov. 9
Nov. 15.	Water mains, Clacton-on-Sea, England		Nov. 9
Nov. 15.	Water-works, Kenney, Ill.		Nov. 9
Nov. 15.	Sewer improvements, Buffalo, N. Y.		Nov. 9
Nov. 15.	Bridge, Montesano, Wash.		Nov. 9
Nov. 16.	Plumbing, West Point, N. Y.		Oct. 19
	Advertised, Eng. News, Oct. 19 to Nov. 9.		
Nov. 17.	Reservoir work, Boston, Mass.		Oct. 19
	Advertised, Engineering News, Oct. 19.		
Nov. 17.	Surface soil, Clinton, Mass.		Nov. 2
	Advertised, Eng. News, Nov. 2 and 9.		
Nov. 17.	Artesian well, Fort Mott, N. J.		Nov. 9
Nov. 17.	Water-works, Runcorn, England		Nov. 9
Nov. 17.	Breakwater, North Bay, Ingosh, N. S.		Nov. 9
Nov. 18.	Plumbing, Newport, R. I.		Nov. 9
	Advertised, Engineering News, Nov. 9.		
Nov. 18.	Army quarters, Brooklyn, N. Y.		Nov. 2
Nov. 18.	Sewers, Wilkesbarre, Pa.		Nov. 2
	Advertised, Eng. News, Nov. 2 and 9.		
Nov. 18.	Heating, etc., Norfolk, Va.		Oct. 26
Nov. 20.	Iron pipe, Glasgow, Scotland		Oct. 26
Nov. 20.	Dredging, Delaware, River, Pa.		Oct. 26
	Advertised, Eng. News, Oct. 26 to Nov. 16.		
Nov. 20.	Sewers, Chicago, Ill.		Nov. 2
Nov. 20.	Cement and sand, Washington, D. C.		Nov. 2
	Advertised, Eng. News, Nov. 2 and 9.		
Nov. 20.	Telephone line, Fort Stanton, N. Mex.		Nov. 9
Nov. 20.	Work house, Southampton, England		Nov. 9
Nov. 21.	Stables, West Point, N. Y.		Nov. 9
Nov. 21.	Stone, St. John's River, Fla.		Nov. 2
	Advertised, Eng. News, Nov. 2 to 16.		
Nov. 22.	Dredge, Montgomery, Ala.		Oct. 26
	Advertised, Eng. News, Oct. 26 to Nov. 16.		
Nov. 22.	Public comfort building, New York, N. Y.		Oct. 26
Nov. 22.	Army barracks, Willets Point, N. Y.		Oct. 26
	Advertised, Eng. News, Oct. 26 to Nov. 16.		
Nov. 22.	Electric lighting, Norfolk, Va.		Oct. 19
	Advertised, Eng. News, Oct. 19 to Nov. 16.		
Nov. 22.	Laundry building, Boston, Mass.		Nov. 2
Nov. 22.	Condenser plant, Middlebrough, England		Nov. 2
Nov. 24.	School addition, South Framingham, Mass.		Nov. 2
Nov. 24.	Crematories, Minneapolis, Minn.		Nov. 2
Nov. 24.	Steel bridges (2), Tiskilwa, Ill.		Nov. 2
	Advertised, Eng. News, Nov. 2 to 16.		
Nov. 25.	Electric plant and water-works, Batavia, O.		Nov. 2
Nov. 25.	Water-works, Baltimore, Md.		Nov. 9
	Advertised, Eng. News, Nov. 9 and 16.		
Nov. 27.	Street improvements, Cincinnati, O.		Nov. 2
Nov. 27.	Court house, Atlanta, Ga.		Oct. 5
Nov. 27.	Dredging, Harlem River, N. Y.		Oct. 26
	Advertised, Eng. News, Oct. 26 to Nov. 16.		
Nov. 27.	Public lighting, Toledo, O.		Nov. 9
Nov. 27.	Electric plant, Essex, England.		Nov. 9
Nov. 28.	Sewers (3½ miles), Tarboro, N. C.		Nov. 9
	Advertised, Engineering News, Nov. 9.		
Nov. 28.	Irrigation franchise, Anaheim, Cal.		Oct. 26
Nov. 28.	Dredging, Everett Harbor, Wash.		Oct. 5
	Advertised, Eng. News, Oct. 5 to Nov. 16.		
Nov. 28.	Court house, Pipestone, Minn.		Sept. 21
Nov. 28.	Electric wiring, Newport, Ky.		Nov. 2
No date.	Asphalt paving, Mexico, Mexico.		Oct. 19
"	Water-works franchise, Tannersville, N. Y.		Oct. 26
No date.	Sinking shaft, Alderson, Ind. Ter.		Nov. 9
"	Railway cars (640), Milan, Italy		Nov. 9

RAILWAYS.

ALLEGHENY VALLEY.—The citizens of Clarion, Pa., have pledged $40,000 for the building of a branch of this railway from Sligo to Clarion, 11 miles. C. B. Price, Gen. Supt., Pittsburg, Pa.

ARKANSAS & OKLAHOMA.—J. M. Bayless, Pres., Cassville, Mo., informs us that this company has 38 miles of line constructed, and that 52 miles have been located as far as the Grand River, Ind.T. A. M. Stalnaker, Ch.Engr., 208 New York Life Bldg., Kansas City, Mo.

BRADFORD CENTRAL.—Reports state that this company has appointed George A. Ricker, Buffalo, N. Y., and W. B. Jester to have charge of a permanent engineer corps for this proposed line from Canton, on the Northern Central R. R., to Tonawanda, Pa., on the Lehigh Valley R. R., 30 miles. A. F. Chapman, Pres.

BRAZIL.—The Compania Mechanica e Industrial of Sao Paulo, Brazil, representatives of some English concerns, are reported to have secured the contract for the supply of rails and other material for the Central R. R. Their bid for the entire track material required is said to have been $1,025 below that of any other competitor.

CALIFORNIA.—U. S. Grant, Geo. W. Maison, Geo. H. Ballow and M. A. Luco, of San Diego, Cal., are reported to have applied for a franchise for a railway along the Bay of San Diego. The purpose of granting the franchise is to facilitate the construction of a railway from the Bay of San Diego to the Colorado River and thence eastward to form a new transcontinental line. The grantees of the franchise have until January, 1904, in which to carry out the undertaking. A proposed route via Salt Lake meets with favor.

CANE BELT.—Grading has been completed on this line from Eagle Lake to Sealy, Tex., 18 miles, and about 9 miles of rails laid. Work is being pushed and grading has commenced on the south end from Bonus south. The line has been located to Wharton about 15 miles and contracts let. It is the intention of the company to extend the line in the near future to some point on the Gulf, probably Velasco, about 60 miles from Wharton. Wm. Dunovant, Pres., Eagle Lake, Tex.

CHIHUAHUA & PACIFIC.—E. S. Safford, Ch. Engr., Chihuahua, Mexico, informs us that this proposed railway from Chihuahua to the Pacific Coast, via Santa Isabel, San Andres, San Antonio and El Rosario, Mex., 600 kilometers (372.6 miles), will at first be built from Chihuahua westerly to Guerrero, 200 kilometers. About 90 kilometers are now in operation; all the bridge masonry has been completed; grading will be completed by Dec. 1; track has been laid to viaduct No. 4, and about 103 kilometers of road will be completed by March 1, 1900. The company is reported to have already bought five locomotives and considerable equipment and supplies. Almeric H. Paget, 80 Broadway, New York.

COAST RY. OF NOVA SCOTIA.—L. H. Wheaton, Ch. Engr., Yarmouth, N. S., informs us that all the grading has been completed, 16 miles of track laid, 11 miles of track ballasted, bridges erected, fences three-fourths completed and station buildings all completed except at Barrington Passage, on the extension of this line from East Pubnico to Barrington Passage, via Woods Harbor, N. S., 20 miles. The American Steel & Wire Co., Pittsburg, Pa., is building the fence; the Hamilton Bridge Works, Hamilton, Ont., the bridges, and Townsend & Co., Woods Harbor, N. S., is doing the other work. Thomas Robertson, Pres., Yarmouth.

COLORADO.—Reports state that a line will be built from Beulah, a summer resort near Pueblo, to connect with that city. Work of grading will be begun by Dec. 1. About $1,000,000 will be spent on the road. David A. Kelley, the Pueblo Business Men's Association, and J. N. Carlisle, Pueblo, Colo., are interested.

CORSICANA & GULF.—This company has acquired the right of way and franchises of the old Corsicana & Southeastern Ry., and will construct a line from Corsicana to Sabine Pass, Tex., 240 miles. Active work is expected to begin about Jan. 1. S. H. Dixon, Corsicana, Tex., is interested.

DELAWARE VALLEY, HUDSON & LEHIGH.—This company was reorganized Oct. 27 with a capital stock of $1,000,000, to construct a line from Wind Gap, Pa., to Port Jervis, N. Y., about 50 miles. Grading has been completed between East Stroudsburg and Bushkill, 12 miles. Joseph H. Shull, Pres., Stroudsburg, Pa., is quoted as saying that the line would be built this year if the right of way could be obtained.

ELIZABETH CITY & WESTERN.—David Cox, Ch. Engr., Hertford, N. C., informs us that this company proposes to build a steam railway from Elizabeth City to Bosley, via Canaan and Nicanor, N. C., about 30 miles. Surveys have been made but no work has yet been done nor contracts let.

EMMITSBURG.—Reports state that this company is about to extend its line, now running from Emmitsburg to Rocky Ridge, Md., seven miles, to Woodsboro, about five miles from Rocky Ridge. Wm. A. Himes, Pres. and Gen. Mgr., New Oxford, Pa.

FORT WORTH & RIO GRANDE.—This company expects to extend its line from the present southern terminus at Brownwood in direction of San Antonio, Tex., about 175 miles, opening up the coal and iron fields of central Texas. Surveying parties have been in the field for some time, and the location will soon be decided upon and announced. W. B. King, Ch. Engr., Fort Worth.

GREAT NORTHERN.—Reports state that a survey is under way for a new extension of this line from Index, Wash., up to the north fork of the Skykomish River to Galena and thence easterly into the Troublesome mining district, about 16 miles. J. F. Stevens, Ch. Engr., St. Paul, Minn.

GULF & BRAZOS VALLEY.—This railway company has laid track from Peck City to Mineral Wells, Tex., 11 miles. The line has been located to Henrietta, 70 miles further north, 14 miles of which has been graded, and it is expected to complete this portion of the road within the next six months. The line will ultimately be extended north to Fort Sill, Ind. Ter. South from Peck City the road will be built through Stephenville, Lampasas, Llano and Comfort to Eagle Pass, with a branch from Lampasas through Taylor and Giddings to Sealy. The total length of line constructed and projected in Texas amounts to nearly 600 miles. W. A. Squires, Pres., Henrietta, Tex.

GULF, BEAUMONT & GREAT NORTHERN.—Jas. F. Weed, Ch. Engr., Beaumont, Tex., informs us that this line has been located from Jasper to Shreveport, Tex., via San Augustine, Center, Teneha and Waskom, Tex., 150 miles. The railroad commission has authorized a bond issue of $19,600 a mile. The company has bought and received 30 miles of rails, and it is expected to let contracts in a few days from the Boston office. John H. Kirby, Pres., 12 Pearl St., Boston, Mass.

INDIANAPOLIS SOUTHERN.—D. M. Parry, Pres., Indianapolis, Ind., informs us that surveys are about one-half completed and the right of way is being obtained for this new line from Nashville to Evansville, Ind., 250 miles. Contracts will be let in the spring.

IOWA CENTRAL.—A. M. Farquharson, Marshalltown, Ia., informs us that this line has been built from Belmond to Algona, Ia., 37.3 miles. Work commenced March 15, and will be all completed by Nov. 30. Robert Kimball, New York; C. C. Hill, Ch. Engr., Belmond, Ia.

ITALY.—Reports state that bids are wanted by M. Massa, Gen. Dir. of the Italianapenia Strade Ferrate del Mediterraneo, Milan, for the supply of 641 railway cars of different kinds.

KANSAS, OKLAHOMA & GULF.—This company has filed in Oklahoma a resolution for the extension of the line from Blackwell, Okla., south through Grant, Noble, Garfield, Logan, Kingfisher, Canadian and Oklahoma counties, to a point on the Chicago, Rock Island & Pacific Ry. between North Enid and El Reno, about 125 miles. Surveys are to be made at once. E. L. Peckham, Pres.

LOCKHART MILLS.—John B. Cleveland, Spartanburg, S. C., informs us that about six miles have been graded on this new 15-mile line to Lockhart Mills. The road is under construction by R. C. Strother, Jonesville, S. C. Work is to be completed about Dec. 1. John C. Carey, Pres., Lockhart, S. C.

MEXICO.—The Mexican "Herald" states that A. O. Bailey, a cattle man of Columbus, N. Mex., has obtained a concession for a railway from Deming, N. Mex., through the Sierra Madre mining region of the state of Chihuahua, then crossing the range to Topolobampo or Mazatlan.——Jose Garcia and Ernesto Diaz have obtained a concession for the construction of the folowing rail lines: From Guadalupe Hidalgo, via Atzcapotzcalco, Tacuba, Tecamachalco, Nonoalco, San Angel, Covoacan and Tlalpam to Xochimilco; from Naucalpam to Tacuba and Mexico, and branch lines from Covoacan to Mexico, and from Atzcapozcalco to Mexico. Surveys and definite location must be presented to the department of communications within three months.

MILWAUKEE & SUPERIOR.—This company is said to be considering the requests of Hustisford, Juneau and Beaver Dam, Wis., for the construction of an extension from North Lake to Beaver Dam, Wis. Henry Herman, Gen. Mgr., Milwaukee, Wis.

NEW YORK, NEW HAVEN & HARTFORD.—Reports state that the work begun last week in Bridgeport, Conn., on the proposed grade-crossing improvements, has been suspended owing to the present unwillingness of the city council to pay $400,000 of the total estimated cost of $3,000,000.

OTTAWA & GATINEAU.—Guy C. Dunn, Ch. Engr., Ottawa, Ont., informs us that this line is completed from Ottawa to Gracefield, about 60 miles, and that work is under way by the company from Gracefield to Maniwaki, 23 miles. Most of the right of way has been obtained, and work is expected to be completed early next summer. Heavy rock work will be done this winter. H. J. Beemer, Pres., Montreal, Que.

PITTSBURG, JOHNSTOWN, EBENSBURG & EASTERN.—E. A. Tennis, Philadelphia, Pa., is reported to have commenced the construction of the proposed extension from the "Y" above Juniata Junction into Altoona, Pa. P. J. Fagen & Co., Altoona, are about to fill in the large trestle between Altoona and Wopsy.

RALEIGH & EASTERN.—Surveys are under way for this proposed line from Raleigh, N. C., easterly into the long-leaf pine region, and convict labor will be placed on the construction of the same as soon as located. Three routes are under consideration. J. S. Carr., Pres., Durham, N. C.; T. M. T.McKennan, Ch. Engr., Raleigh.

RICHMOND & TIDEWATER.—C. P. E. Burgwyn, 821 East Main St., Richmond, Va., is reported to have been selected to make surveys for this projected line from Richmond to tidewater near Gloucester Point. Miles M. Martin is one of the promoters.

SAN ANTONIO & BROWNSVILLE.—L. J. Hart, Secy., San Antonio, Tex., informs us that surveys have been completed and part of the capital stock secured for this proposed railway from San Antonio to Brownsville, Tex., 275 miles. It is expected to let the contract for constructing the first 35 miles during November. William Kennedy, Ch. Engr., Austin, Tex.

SIAM.—Hamilton King, U. S. Consul-General, states that a line will probably be started this year running to Ratburee, 45 miles, and Pechaburee, 73 miles from Bangkok, Siam, toward the Burmese frontier. The survey only is completed, and no materials for construction have yet been ordered. The King has just granted a franchise to Prince Chow Sai to build 70 miles of railway from the Menam River to the Nakawn Nayoke River, with several branches. This passes through a rich rice country, thickly populated. The King has also a programme consisting of lines east and west aggregating more than 500 miles of additional railways, but the revenue of the country is not sufficient to carry out all these works at one time. For this purpose it is not unlikely that the government may negotiate a loan in the near future.

TEXAS & NEW ORLEANS.—Ricker & Lee, Galveston, Tex., are reported to have been awarded the contract for building an extension of this line from Cedar to Athens, Tex., 25 miles. Further extensions are projected. J. T. Mahl, Ch. Engr., Houston, Tex.

STREET AND ELECTRIC RAILWAYS.

MADISON, ME.—It was announced Oct. 31 that the Somerset Traction Co., now operating the electric line from Skowhegan to Madison, will build an extension to North Anson, four miles. The roadbed will be built this fall and the rails laid in the spring.

SHELBURNE, VT.—The Hinesburgh R. R. Co., of Burlington, Vt., is said to contemplate the construction of an electric railway from Burlington to Shelburne and Shelburne Falls. Curtis Page, Selectman; F. O. Sinclair, Engr., Burlington.

CONCORD, N. H.—The Waltham, Ayer & Pepperell St. Ry. Co. has applied for a franchise to build in this town. John B. Studley, Chn. Bd. of Selectmen.

HAVERHILL, MASS.—E. B. Fuller, Haverhill, informs us that the Haverhill & Southern New Hampshire St. Ry. Co. is in process of organization and is about to ask for locations in Haverhill and Methuen. It is proposed to build from Haverhill through Methuen to the state line, six miles.

LIBERTY, N. Y.—C. H. Nichols, Ch. Engr., Liberty, informs us that the surveys are well under way on the proposed Liberty & Jeffersonville Electric R. R. from Liberty to Jeffersonville, via White Sulphur Springs and Youngsville, 12 miles. The capital has been secured, and contracts were expected to be let this week. There will be heavy grading for the first four miles; the steepest grade will be 3%, and the sharpest curve, 16°.

LONG ISLAND CITY (L. I.), N. Y.—Reports state that the New York & North Shore Ry. Co. and the Long Island Electric R. R. Co. have been consolidated, with a capital stock of $2,100,000. R. T. McCabe, 29 Broadway, New York; J. R. Beetem, Vice-Pres., Flushing, N. Y. The construction of the Flushing and Jamaica branch is progressing rapidly.

ROCHESTER, N. Y.—Grading is reported to be in progress on the Rochester & Sodus Bay Electric Ry., and it is expected to complete the grading to Webster City by Dec. 1. In the spring work will be pushed until Sodus Bay is reached. The main power house will be located east of Irondequoit Bay, and work thereon is expected to commence at once; there will also be two sub-power stations. Ira D. Luddington, Rochester, has the general contract.

SEACLIFF (L. I.), N. Y.—The Nassau County Ry. Co. has been granted a franchise to construct a street railway in this village.

ELIZABETH, N. J.—The Elizabeth & Westfield Traction Co. applied to the council Nov. 1 for a franchise for a double track trolley line from 3d Ave., Roselle, to connect with the West Jersey & Elmora branch of the North Jersey Traction Co. Chandler W. Riker, Newark, N. J., is interested.

JERSEY CITY, N. J.—The Jersey City, Hoboken & Paterson St. Ry. Co. has been formally organized, with $20,000,000 capital stock, by the consolidation of the North Hudson County Ry., the Paterson St. Ry., the Paterson Central Electric Ry., the Saddle River Traction, the Palisades R. R., the White Line Traction, the Paterson, Passaic & Rutherford Electric Ry., the Jersey City, Hoboken & Rutherford Electric Ry., and the Paterson Horse R. R.

MONTCLAIR, N. J.—The North Jersey St. Ry. Co. is reported to have been granted a franchise.

JOHNSTOWN, PA.—Thos. J. Keenan, Jr., commenced work Oct. 25 on the extension of the line of the Johnstown & Somerset Traction Co., now controlled by the Johnstown Passenger Ry. Co., to Windber.

LOCK HAVEN, PA.—It is reported that the Railway Companies General of Philadelphia, Pa., proposes to acquire all the trolley lines between Lock Haven and Sunbury, and to construct the necessary track to connect the same.

OIL CITY, PA.—The Citizens' Traction Co. has been organized here, with $150,000 capital stock, to build another street railway for this city. Daniel J. Geary, Pres.; James Hasson, Treas.

PITTSBURG, PA.—The county commissioners have granted a franchise to the Wilkinsburg & East Pittsburg St. Ry. Co. to build on the Braddock Township Road from Swissvale to North Braddock; the Carnegie, Heidelberg & Bridgeville Passenger Ry. Co., to build on the Washington Pike; and on Oct. 25, to the East McKeesport St. Ry. Co., to lay double tracks on the Crooked Road in Versailles.

REYNOLDSVILLE, PA.—E. A. Ferrin, Pres. of Reynoldsville Electric Co., Reynoldsville, informs us that the Reynoldsville Traction Co. will construct 14 miles of trolley line connecting Reynoldsville, Rathmel, Big Soldier and Eleanora. Surveys will be begun soon, and construction work will be commenced early in the spring.

WILMINGTON, DEL.—The Wilmington City Ry. Co. has been making a survey for a line to run from this city along the Newport Pike to Newport and thence to Marshalltown. Superintendent Vandergrift expected surveys to be completed this week.

BARBERTON, O.—The Barberton, Doyleston & Massillon Electric Ry. Co. was incorporated Oct. 28, with $50,000 capital stock, to build an electric railway from Barberton to Canton, via Johnson, Jamestown, Doylestown, Canal Fulton and Massillon. A line is already built between Massillon and Canton. D. King, Pres.; W. A. Garver, Treas., both of Lima, O.

COLUMBUS, O.—The Columbus, Buckeye Lake & Newark Traction Co. has been incorporated, with a capital stock of $100,000, to build an electric railway. M. Spellacy, Columbus; A. J. Warner, Marietta, O., and W. R. Pomerene, Coshocton, O., are incorporators.

DAYTON, O.—M. J. Mandebaum & Co., F. D. Pomeroy and R. E. Akins, of Cleveland, O., are reported as interested in the proposed electric line in the Miami Valley.

POMEROY, O.—Work will soon commence, according to reports, on the construction of the proposed Pomeroy, Middleport & Racine St. Ry., from Racine to Middleport, in which Percy M. Chandler and John B. McAfee, of Philadelphia, Pa., are said to be interested.

ANDERSON, IND.—Press reports state that the Union Traction Co. has let contracts amounting to nearly $1,000,000 for its proposed power plant, etc., for the 108 miles of electric road now in operation or under construction in Anderson, Muncie, Marion, Elwood, Alexandria, Middletown, and other points. Electric power will also be furnished to houses and manufacturers in all the cities touched by the company.

HARTFORD CITY, IND.—F. G. Brownell, Muncie, Ind., has been granted a franchise to build in this city. It is proposed to connect Hartford City with Muncie, via Eaton and Dunkirk.

INDIANAPOLIS, IND.—The Arbuckle-Ryan Co., Toledo, O., is reported to have been awarded the contract for furnishing complete power-house equipment for the Indianapolis & Greenfield Traction Co.'s new line, consisting of boilers, engines, dynamos, etc. The machinery must be ready for operation by April 1. The Kirkpatrick Construction Co., Greenfield, is constructing the roadbed, and the contract for overhead work is about to be let.

SAULT STE. MARIE, MICH.—Emil G. Endress & Co., Sault Ste. Marie, have been granted a 20-year franchise covering the principal streets in this city. Construction must begin within two years.

CHICAGO, ILL.—The People's Passenger Transportation Co. has applied to the council for a 25-year franchise to operate on the streets now traversed by the Union Traction Co. Lewis H. Mitchell, Attorney, 164 La Salle St. The company was incorporated Sept. 13, with $5,000 capital stock by Morris D. Mason, 319 Monadnock Block; Fred. H. Vercoe, 164 La Salle St., and others.

LAWRENCE, KAN.—An electric railway is contemplated and will probably be built from Lawrence to Osage City and Carbondale. The Commercial Club of Lawrence is behind the project.

MILWAUKEE, WIS.—The Milwaukee & Muskego Lakes Electric Ry. Co. has been incorporated, with $25,000 capital stock, with power to increase to $300,000, to build to Muskego Lake, via Root Creek and Hales Corners. S. M. Williams, Stutley I. Henderson and Fred. W. Henderson are incorporators.

ST. JOSEPH, MO.—W. J. Pollard, John Vey and C. F. Ruegseggar, all of Buchanan county, have petitioned the county court for a franchise for an electric railway from St. Joseph to Savanah; estimated cost, $100,000.

CORSICANA, TEX.—The Corsicana Commercial Club offers a liberal franchise to parties agreeing to construct a first-class street railway system in this city. Population, 12,000.

SAN PEDRO, CAL.—Bids were received by the city trustees Oct. 25 for an electric street railway franchise from W. S. Hook, of Los Angeles Traction Co., and L. W. Blinn, Pres. San Pedro Lumber Co. The bids were held for further discussion on Nov. 7.

HAVANA, CUBA.—W. R. Brixley, manufacturer of Kenite Cables, 203 Broadway, New York, has been awarded the contract for 40 miles of rubber-covered feeder wire for the electric road to be built by the Havana Electric Ry. Co. The road will be 54 miles long. Mr. Brixley has secured other large contracts from Japan and elsewhere, and with a view to extending his export trade is now building plants in Perth Amboy and Bergen Point, N. J. The General Electric Co., Schenectady, N. Y., has received the contract for three 850-K-W. direct connected generators and 110 car equipments, etc., at $178,000, from the Havana company. G. F. Greenwood, Ch. Engr. and Gen. Mgr., Havana, Cuba.

GUILDFORD, SURREY, ENG.—Reports state that on Nov. 14 a hearing will be given by the Surrey county council on the matter of constructing an electric railway to be about 29 miles long. After the hearing application will have to be made to the Parliamentary Light Railway Commissioners, London.

NEWCASTLE-UPON-TYNE, ENG.—Bids are asked until Nov. 30 for furnishing two 1,000-HP. generators for the electric tramways. Chas. Hopkinson, Engr., 29 Princess St., Manchester, or 26 Victoria St., London, Eng.; Hill Motum, Town Clk.

BARCELONA, SPAIN.—J. G. Lay, U. S. Consul-General, Barcelona, reports the following proposed work on certain electric railways in this city: The Compania de Tranvias de Barcelona a San Andreas, which has recently changed hands, will extend its line five miles to Sabodell, and about five miles to Horta, and will also convert the steam road into an electric line. Oscar Schmidt-Corr, Engr., Barcelona. The Compania de Tranvias de Barcelona a Sans, operating a horse-car line three miles long, has asked for permission to operate the road by electricity. Capital stock, $470,000. Francisco Esdene, Mgr. The Compania General de Tranvias, it is understood, will change the motive power of its line from steam to electricity. The Verrocarril de Barcelona a Sarria, operating a double-track line three miles long, has also applied for permission to change from steam to electricity. Capital stock, $400,000. Mr. Lay also states that other street railway work is proposed, and that he will be glad to send the names, addresses, etc., of projectors of new lines or improvements to old ones to American manufacturers.

SAO PAULO, BRAZIL.—The Morris Electric Co., New York, is reported to have been awarded the contract for furnishing 1,500 iron trolley poles for the Sao Paulo Electric Light & Power Co.; estimated cost, $60,000. It is said that the poles will be manufactured by the Electric Railway Equipment Co., of Cincinnati, O.

ELECTRIC LIGHT AND POWER.

PORTLAND, ME.—The contract for electric lighting between this city and the Portland Electric Light Co. has been signed. The company will furnish not less than 240 1,200-c. p. arc lights, with incandescent lights as required, for five years from Dec. 1. The company will install at once, according to local papers, an auxiliary steam plant.

FAIRPORT, N. Y.—E. J. Fisk, of the committee, writes us that plans have not yet been completed for the new $20,000 plant.

GREENPORT, N. Y.—The contract for an electric light plant has been let to W. M. Sheehan, Newburgh, N. Y., at about $10,000. The plant will have 1,000 16-c. p. lights. C. Z. Southard, Engr., 1274 Bergen St., Brooklyn.

NEW YORK, N. Y.—Reports state that the contract for 16 5,500-HP. engines for the Waterside power station of the N. Y. Light, Heat & Power Co. has been let to the Westinghouse Machine Co., Pittsburg. Thayer & Co., 39 Cortlandt St., and Milliken Bros., 11 Broadway, were recently awarded the contract for the boilers and the building respectively. These are the only contracts for the plant let so far, according to reports.

UTICA, N. Y.—The time for completing the power dam in the gorge at Trenton Falls for the Trenton Falls Electric Light & Power Co., has been extended to July 1. The contract was let in August for the excavating, dam, etc., to the Warren-Burnham Co., 81 Fulton St., New York, at $135,117, as noted in our issue of Aug. 31. The power company expects to be able to deliver power by July 1. The pipe and electrical apparatus will be manufactured this winter. The contracts have not yet been awarded. M. J. Brayton, Gen. Mgr., Utica.

MOUNT HOLLY, N. J.—The American Investment Co. is reported to have purchased 18 acres of land, including water rights, from Mrs. Richard C. Shreve. The company proposes to build a plant to furnish power to Haddonfield, Merchantville and Mooretown.

BLOOMSBURG, PA.—J. B. Russell, Secy. and Treas., Standard Electric Light Co., writes us that the proposed plant will have a new boiler house, two new 125-HP. boilers, stack, steam pipes, 250-HP. engine, 125-light arc machine, 60-K-W. alternator, 300-HP. feed-water heater, enlarging dynamo and engine room. These are nearly all contracted for. E. F. McCabe, Mech. Engr.

PHILADELPHIA, PA.—The council has authorized the addition of 632 new electric street lights, over the mayor's veto.——The director of public safety will ask for bids in about two weeks for electric lighting for 1900.

REYNOLDSVILLE, PA.—E. A. Ferrin, Pres., Reynoldsville Electric Co., writes us that bids are wanted now for the machinery, etc., for the plant to cost about $30,000. The plant will have a capacity for 60 2,000-c. p. arc and about 3,000 16-c. p. incandescent lights. It is proposed to begin work at once on the plant and on a trolley line to be 14 miles long in the spring.

ANNAPOLIS, MD.—The following bids were received by the bureau of navigation, Navy Dept., Nov. 2, for erecting a plant at the naval academy; (1) being for the entire work; (2) boilers, feed pump, feed water heater, steam separator, piping in boiler room and main steam pipe to engine room, ready for operation; (3) same as item 2, except substitute return tubular boilers; (4) dynamos and switchboard ready for operation, and the interior wiring and lighting system complete; (5) engines, condensers, condenser pumps and engine room piping, ready for operation: N. J. Foundry & Machine Co., 26 Cortlandt St., New York, (4) $24,485; McCay Engineering Co., Baltimore, Md., (1) $48,840, (4) $23,870; Thresher Electric Co., Dayton, O., (1) $57,679, (4) $32,985; Benj. O. Ellis, New York, (1) $47,600; Northern Engineering Co., Bayonne, N. J., (1) $46,239, (2) $10,600, (4) $23,550, (5) $12,989; John F. Buchanan & Co., Philadelphia, Pa., (4) $32,000, Westinghouse dynamo; General Electric dynamos, add $100; Edward Heaton, Park Row Bldg., New York city, (4) and (5) $53,584; Babcock & Wilcox Co., New York, (2) $9,700; Morton, Reed & Co., Baltimore, (1) $43,740, (5) $12,921; Crook, Horner & Co., Baltimore, (2) $8,700, (5) $10,227; Talmadge & Wilson, Washington, (5) $12,380; the United Co., Park Row Bldg., New York, (1) $45,055, (2) $9,970, (3) $11,964, (4) $25,764, (5) $11,268; alternative bids: Babcock & Wilcox boilers, add $600; Aultman & Taylor boilers, add $1,185; Heine Safety Boiler Co.'s boilers, add $235; Oil City Boiler Works boilers, add $335; Harrisburg engines, add $615; for International Power Co. engines, add $1,000; if lead-covered wire is used in underground cable, add for (1) $542, for (2) $542; General Electric Co., New York, (4) $24,514; if lead-covered pipe, add $550; Westinghouse Electric & Mfg. Co., Pittsburg, (4) $30,198, (4 and 5) $43,119; D'Olier Engineering Co., Philadelphia, (4) $33,000. Contract let to Morton, Reed & Co., at $43,740.

WASHINGTON, D. C.—The district commissioners have decided to have Eckington lighted by electricity.

MANCHESTER, VA.—The council has given the necessary permits to the Virginia Electrical Ry. & Development Co. for the building of its conduits.

KINSTON, N. C.—The town authorities are reported to have closed contracts for part of the new machinery for the plant.

COLUMBIA, S. C.—Bids are asked until Nov. 13 for 175 1,200-c. p. arc lights for five years. T. T. Talley, Cy. Treas.

ELBA, ALA.—Reports state that a company with a capital of $100,000 has been organized to put in a plant.

BASTROP, LA.—The contract for a plant and water-works has been let to R. M. Adams, at $9,000, according to reports.

KNOXVILLE, TENN.—A lock and dam is to be built in the Tennessee River here to afford power for operating factories, to cost about $250,000, according to reports.

COVINGTON, O.—C. O. Lucas, of Greenville, O., has submitted plans for a plant to cost $5,000, and water-works to cost $20,000.

TOLEDO, O.—Bids are asked until Nov. 27 for lighting the streets, public buildings, etc., with electricity or gas for five years from Jan. 1. Wm. O. Holst, Cy. Clk.——The Toledo Consolidated Electric Co., it is stated, proposes to extend its lines to Ironville.

ANDERSON, IND.—The Union Traction Co., it is stated, has let the contract for a power plant for the proposed electric railway, to be about 108 miles long, at about $1,000,000.

ATHENS, MICH.—F. T. Bisbee has purchased the Dean farm, and, it is stated, proposes to build a plant on it to furnish power and electricity to Athens, Sherwood & Colon.

CARBONDALE, ILL.—The plans, etc., for a plant and water-works, prepared by J. J. Hainsworth, Indianapolis, Ind., are reported to have been accepted.

DES MOINES, IA.—The General Electric Co. proposes to next season improve its power station located here.

MINNEAPOLIS, MINN.—Local papers state that the Westinghouse Electric Co., Pittsburg, Pa., has under consideration the question of building a power plant at Taylor's Falls, Wis., 40 miles north of this city, to develop about 6,000 HP. The reports state that nothing definite has been done, and it is not likely anything will be for some time. Such a plant as proposed will cost about $750,000.

SOUTH OMAHA, NEB.—The South Omaha Water-Works Co. has been granted a 25-year contract and has been awarded a 5-year contract.

VICTOR, COLO.—R. M. Jones, Supt. of the Pike's Peak Power Co., writes us that the proposed plant will develop 7,500 HP., to be delivered to the Cripple Creek mining district.

BUTTE, MONT.—A local company is reported as being organized to put in a plant at the Big Hole dam to cost about $500,000.

SAN FRANCISCO, CAL.—A. M. Hunt, Elect. Engr., 331 Pine St., writes us that the question of bonds for the city plant will probably be submitted to the people at an election in the near future.

GRAND FORKS, B. C.—It is reported that about $30,000 will be spent in improving the water-works and the light plant. About 2,000 lights will be added. R. C. Rickert, Engr., Spokane, Wash.

PETERBORO, ONT.—The Central Ontario Power Co. will soon be organized to build the proposed power plant at Burleigh Falls, 17 miles from here, by which it is proposed to furnish this city and Lindsay with power and light. Surveys and plans have been completed, and it is probable that work will soon be begun. It is said that $1,000,000 in bonds will be issued. Richard Harcourt, Minister of Education, Toronto and Ottowa, Ont.; Jas. Kendry, Pres. Auburn Power Co., Peterboro, and J. Alex. Culverwell, Elec. Engr., Toronto, are interested.

RAT PORTAGE, ONT.—T. R. Deacon, Rat Portage, is reported to have made surveys and a report for utilizing the White Fish Rapids for power purposes by the Regina Mining Co.

MANAOS, BRAZIL.—The Webster Mfg. Co., 38 Dey St., New York, N. Y., is reported to have been awarded the contract at $17,000 for the supply of power transmission, elevating and conveying machinery for an oil plant now in course of erection by a Portuguese concern in the vicinity of Manaos.

BUENOS AYRES, ARGENTINE.—Reports state that the city authorities are perfecting a scheme for a plant to cost about $2,000,000. A plant to have a capacity for 8,000 arc and a number of incandescent lights will be built. About 4,000 ft. of feeder and 600,000 ft. of distribution cable will be wanted.

ESSEX, ENGLAND.—Bids are asked by the governors until Nov. 27 for furnishing and erecting a complete plant for the Felsted School. O'Gorman & Cozen-Hardy, Engrs., 66 Victoria St., Westminster, London.

HONOLULU, H. I.—M. M. Kohn, Gen. Mgr., Oceanic Gas & Electric Co., Ltd., Honolulu, is registered at the Hoffman House, New York, his business in New York being to purchase electrical and mechanical machinery.

NEW COMPANIES.—Equitable Heat, Light & Power Co., Davenport, Ia., and Buffalo, N. Y.

Knoxville Electric Co., Knoxville, Pa.; $100,000; J. P. Moore, Pres.; P. D. Lockwood, Secy.

New York Marine Power Co., Passaic, N. J.; $30,000, of which $2,000 is paid in; Charles H. Tucker, 129 Pennington Ave.; Frank S. Newall, Lafayette Ave., both of Passaic, N. J.; A. E. Crewe, New York.

Southern Heat, Light & Power Co., Pittsburg, Pa.; $1,000; J. W. Smith, J. Z. Daly, Pittsburg; R. W. Gibbs, Allegheny City, Pa.

Twin City Electric Co., Aberdeen, Wash.; $75,000.

Lake George Light, Heat & Power Co., Warren Co., N. Y.; to furnish electricity to Caldwell, Warrensburg and Bolton, N. Y.; $50,000; Royal C. Peabody, New York; Louis W. Emerson, Warrensburg, N. Y.; Frank E. Loughran, A. R. Noble, Caldwell, N. Y.

United Light & Power Co., New Jersey Corporation Guarantee & Trust Co. Bldg., Camden, N. J.; $100,000; V. H. Conkle, Thomas F. Deegan, Wm. F. Eidell.

Wharton Electric Light, Ice, Water-Works & Cold Storage Co., Wharton, Tex.; $50,000; G. C. Gifford, Edwin Hawes, R. B. Huston.

Citizens' Electric Light & Manufacturing Co., Nunda, Ill.; capital stock increased from $10,000 to $15,000.

Consolidated Electrical Supply Co., Brooklyn, N. Y.; $10,000; F. T. Braillard, Jr., Grace B. Braillard, C. T. Boyd, Broklyn.

Dansville Gas & Electric Co., North Dansville, N. Y.; $80,000; J. M. Edwards, G. A. Sweet, B. O. Oberdorf, J. A. Jackson, Dansville.

Auburn Light, Heat & Power Co., Auburn, N. Y.; $350,000; L. Fleck, J. Flannigan, A. A. Sterling, E. H. Jones, Wilkesbarre; E. S. Newton, Auburn.

Contra Costa Electric Co., Port Costa, Cal.; $20,000, paid in $50; J. Mayo, L. Reniff, I. Citron.

Kane Electric Light & Power Co., Kane, Pa.; $25,000, paid in $2,500; C. V. Gellis, D. H. Miller, C. E. Goodwin, Kane, Pa.

Standard Electric Light Co., Danville, Pa.; $50,000, paid in $5,000; J. B. Russell, Wilkesbarre, Pa.; Wm. D. Boyer, G. Pelton, Scranton, Pa.

Auburn Electric Light Company, Auburn, Ill.; $8,000; J. A. Wheeler, W. H. Ramsey.

Ceramic City Light Co., East Liverpool, O.; $200,000; L. W. Healy, J. H. Brooks.

Sumter Electric Light & Ice Co., Sumter, S. C.; $25,000; C. T. Mason, R. O. Prudy.

Manhattan Light & Power Co., New Jersey Corporation Guarantee & Trust Co. Bldg., Camden, N. J.; $8,000,000; Frank M. Wirgman, George Myers, Jr.

Union Water, Light & Power Co., N. J. Registration & Trust Co. Bldg., East Orange, N. J.; $1,000,000; S. N. Blake, Fred. W. Garvin.

Chemical & Electric Co., New York, N. Y.; $2,000,000; W. S. Sims, C. H. Allen.

Consolidated Electric Co., Manchester, N. H.; $250,000; T. H. Armstrong, Waltham, Mass.; T. E. Brown, Boston.

Hamilton Electric Light & Cataract Power Co., Hamilton, N. Y.; $3,750,000; has acquired control of Hamilton Street Ry. Co., Electric Power & Mfg. Co., Cataract Power Co.

The Municipal Electric Light Co. of Brooklyn; $750,000; and the Citizens' Illuminating Co. of Brooklyn, $500,000, have been consolidated with the Edison Electric Illuminating Co. of Brooklyn.

Lakeview Heights Land Co., develop electricity, Riverside, Cal.; $100,000; K. D. Harger, E. W. Armstrong.

Spring Hill Electric Light & Power Co., Point Marion, Pa.; $1,200.

Anniston Electric & Gas Co., Corporation Trust Co. Bldg., Jersey City, N. J.; $250,000; K. K. McLaren, W. H. Bearly, C. W. Perkins.

National Light Storage Battery Co., Boston; $1,000,000; J. A. Sullivan, P. R. Mansfield.

Railways & Light Co. of America, Trenton, N. J.; $25,000,000; Richard Darable, William H. Brearly, Jersey City.

Rhode Island Electrical Works, Saco, Me.; $125,000; John Booth, Pres.; Chas. D. Wood, Treas., Central Falls, R. I.

Western Electric Co., Denver, Colo.; $50,000; C. A. Armstrong, E. J. Yetter, L. F. Eppich, of Denver.

Globe Electric Co., St. Louis, Mo.; $100,000; G. A. Clark.

BRIDGES.

FORT FAIRFIELD, ME.—The town is reported as having voted in favor of the new steel bridge, to cost about $26,700.

ATTLEBORO, MASS.—The Old Colony R. R. Co. is reported to have been ordered to build a bridge over its line at Broadway, to abolish the grade crossing.

COLLEGE POINT, N. Y.—It is proposed to build a drawbridge over Flushing Creek in conjunction with the proposed road improvements, according to reports.

NEW YORK, N. Y.—The board of aldermen has authorized the issue of $4,000,000 of corporate stock for the construction of the East River bridge.

CAMDEN, N. J.—The question of building a bridge over Cooper's Creek, between Camden and Stockton, is being discussed.

ALLENTOWN, PA.—It is stated that Patrick Monahan, of Easton, Pa., has the contract for building the 540-ft. iron bridge over the tracks of the Lehigh Valley R. R.

HARRISBURG, PA.—City Engineer M. B. Cowden writes that nothing has been done regarding the bridge over the Philadelphia & Reading R. R. at Rutherford.——It is stated that the Pennsylvania R. R. will reconstruct its bridge over the Susquehanna River at Rockville.

MORGANTOWN, W. VA.—The contract for a $15,000 bridge to connect Morgantown and Greenmont has been let to Walter Bros., of Charlestown, W. Va., according to reports.

CEDAR BLUFF, ALA.—Reports state that the contract for constructing a steel bridge across the Coosa River has been let to a Chattanooga firm, at about $27,500.

CHATTANOOGA, TENN.—The question of building a viaduct over Market St. is being discussed, according to reports.

INDIANAPOLIS, IND.—The following lowest bids for the substructures and superstructures of several new bridges were opened Oct. 27: Superstructure: Over Fall Creek, near Hammond's Park, Conrad Bender (wood), $2,674; over Indian Creek, New Columbus Bridge Co., $474; over Brady's Branch, New Columbus Bridge Co., $459. Substructure: Over Fall Creek, Capital Paving & Construction Co., $875; over Indian Creek, Wm Fife, $670; over Brady's Branch, H. W. Tielking, $780; over Buck Creek, Wm. Fife, $645.

CHICAGO, ILL.—City Engineer John Ericson has asked for designs for four new bridges over the Calumet River. The merchants affected by the closing of the Division St. bridge propose to loan the city the money to erect a new one.

MOLINE, ILL.—The Tri-City Ry. Co. has let the contract for building a new bridge over Sylvan Water, from the government island to the Illinois shore of East Rock Island to the Chicago Bridge & Iron Co., Chicago, at about $15,000.

KANSAS CITY, MO.—The city is trying to force the Kansas City Belt Ry. Co. to build a viaduct over its tracks in Kansas Ave., according to reports.

ORONOGO, MO.—Reports state that David Miller has been awarded the contract for building the new 32-ft. bridge south of here at $1,326.

MONTESANO, WASH.—Bids are asked until Nov. 15 for constructing a wood and steel bridge 230 ft. long over Chehalis River. J. A. Sells, County Audr.

COLUSA, CAL.—Reports state that specifications for the foundation of the new bridge over the Sacramento River have been received.

PETERBORO, ONT.—J. E. Belcher, County Engr., writes us that the new 3,900-ft. bridge over Chemong (or Indian Mud) Lake will be part fill and part floating, to cost about $35,000. No contracts have yet been let.

STRATFORD, ONT.—R. R. Long writes that nothing is likely to be done this season regarding the John St. bridge.

ST. MALO, FRANCE.—A. M. Thackara, U. S. Consul, Havre, France, reports that it is proposed to build a bridge over the River Rance to connect this city with St. Servan and Dinard, in the Department of Ille-et-Vilaine. The report states that only private capital can build the structure, but the government, department and cities will assist. The bridge would be about 3,550 ft. long and to cost about $1,000,000.

BUILDINGS.

CAMBRIDGE, MASS.—The board of aldermen is reported to be considering sites for a new school house.

NEWPORT, R. I.—Bids are asked until Nov. 18 for plumbing in barracks addition at Fort Adams, as stated in our advertising columns. H. P. Young, Q.-M., 209 Thames St.

NEW HAVEN, CONN.—It is stated that the Y. M. C. A. will erect a $150,000 building on Temple St.

BROOKLYN, N. Y.—Plans have been filed for a 4-story brick school building, 200 × 69 ft., on Harrison Ave., between Rutledge and Heyward Sts., cost $220,500. C. B. J. Snyder, 59th St. and Park Ave., New York, Arch.——The following bids were received at the Navy Department Nov. 4 for reconstructing the buildings destroyed by fire Feb. 15 at the Brooklyn Navy Yard: Josephus Plenty, Jersey City, $385,000; Penn Bridge Co., Beaver Falls, Pa., $364,000; O'Brien Hoolihan, Syracuse, $360,300; Augustus Smith, New York, $364,725; R. P. & J. H. Staats, Hoboken, $400,000; Post & McCord, New York, $397,000. These bids are for the work to be completed in 14 months. The bids for the work to be done in 10 months were higher.

BUFFALO, N. Y.—The following bids were received Oct. 31 at the office of the supervising architect, Treasury Department, Washington, D. C., for heating and ventilating the post office building: Wm. A. Pope, Chicago $79,897; time, 180 days; Irlbacker & Sons, Buffalo, $73,623; 160 days; Borger Bros. & Co., Columbus, O., $94,185; 180 days; Edward P. Bates, Syracuse, $74,925; 180 days; E. Keeler Co., Williamsport, Pa., $72,900; 150 days; Edward Joy, Syracuse, $79,244; 180 days; Timothy McEvoy, Buffalo, $82,776; 150 days; Chas. B. Kruse Heating Co., Milwaukee, Wis., $73,300; 180 days; The Wells & Newton Co., New York, $85,000; 120 days; Gaylord & Eltapene, Binghampton, N. Y., $71,500; 180 days; E. Rutzler, New York, $77,000; 180 days; Geo. R. Morton, St. Paul, Minn., $81,477; 180 days; Peoria Heating Co., Peoria, Ill., $83,591.60; time, 180 days; Chafer & Becker, Cleveland, O., $78,261; 180 days.

LONG ISLAND CITY, N. Y.—The following bids for construction of Public School No. 5 were received by department of education Nov. 6: John T. Woodruff, 65 3d St., L. I. City., $123,769; H. Probst, 1180 Broadway, $143,950; L. A. Buckl, 405 W. 59th St., $147,500; P. J. Brennan, 22d St. and 6th Ave., $149,958; Hartmann & Horgan, 287 4th Ave., $154,000; Harry McNally, 287 4th Ave., $165,975; Mapes-Reeve Const. Co., 150 Nassau St., $166,691; Tolmie & Kerr, 245 W. 12th St., $167,991; John Thatcher, 54 Park Ave., Brooklyn, $168,082.

NEW YORK, N. Y.—Plans have been filed by C. B. Meyers, Arch., for a $85,000 seven-story brick flat, 145 2d Ave., for S. Jacobs; by John C. Burne, Arch., 102 W. 42d St., for a six-story brick flat, 33d St., west of 8th 8th Ave., cost $90,000, for Schmuck & Montag, 139th St. and 3d Ave.; by Babb, Cook & Willard, Archs., 3 W. 29th St., for a 3-story 73 × 184 ft. brick and stone residence, 5th Ave., 90th to 91st St., to cost $500,000, for Andrew Carnegie, 5 W. 51st St.; by Wm. H. Strom, Arch., 34 Cortlandt St., for a seven-story 177 × 91 ft. brick and stone flat, at 129th St. and Manhattan St., for H. Dougan, 106 W. 105th St.——L. S. Gage, Secy. Treasury, has confirmed the selection of Cass Gilbert, Endicott Bldg., St. Paul, and 111 5th Ave., N. Y., as architect for the new custom house building.——The building 96 and 98 Mott St. was damaged by fire Nov. 3d to the extent of $150,000.——It is stated that work will soon be started on the five 6-story flats on 133d St., near Amsterdam Ave. R. Juster, 831 E. 140th St., owner.

WEST POINT, N. Y.—Bids are asked until Nov. 21 for extending cavalry stables. Address Q.-M., U. S. M. A.

JERSEY CITY, N. J.—The board of education is reported as contemplating the erection of a three-story and basement, steel frame, stone high school building to cost about $300,000.

ALTOONA, PA.—The supervising architect of the Treasury Department, Washington, D. C., will, it is stated, soon ask for plans for a new $37,500 government building.

CHESTER, PA.—The school board has returned the plans of the new school house to the architect to be modified so as to bring the cost within the appropriation of $100,000.

GREENSBURG, PA.—Alden & Harlow, 314 4th Ave., Pittsburg, are reported to be preparing plans for a $25,000 residence for J. C. Huffman.

LANCASTER, PA.—It is reported that the contract for the new Y. M. C. A. building at North Queen and Orange Sts., to be 245 × 64 ft. and cost about $150,000, has been awarded to Wm. Wohlsen.

NEW BRIGHTON, PA.—Plans will soon be started for a $62,500 government building, under the direction of the supervising architect, Washington, D. C., according to reports.

PHILADELPHIA, PA.—Bids are asked until Nov. 13 for erecting a twelve and a nine division school building. A. F. Hammond, Secy. Com. on property.——It is stated that Thos. Reilly, 1616 Thompson St., has the contract for the erection of the 77 × 135 ft. parochial school of the Church of the Ascension, Rev. D. J. Brourhal, pastor, on Westmoreland St., between G and F Sts., cost about $50,000.——Gen. Haywood, U. S. Marine Corps, has recommended the construction of a modern barracks building at the League Island Navy Yard, to cost about $100,000.

PHILADELPHIA, PA.—Geo. F. Payne & Co., Juniper and Pine Sts., are reported to have taken out a permit to alter and add to the office building at 13th and Chestnut Sts., for De Long Bros., from plans by A. W. Barnes, 904 Walnut St., cost $50,000.

PHILADELPHIA, PA.—It will require about $4,000,000 to complete the city hall buildings. Address ex-Mayor Stokley and Architect Powell.

PITTSBURG, PA.—Bids are asked until Nov. 10, for erecting a fire engine house at Hamilton and Braddock Aves. J. O. Brown, Dir. Dept. Pub. Safety.

PITTSBURG, PA.—Plans are being prepared by L. A. Raisig, cor. Penn and Wood Sts., Wilkinsburg, Pa., for 15 brick and stone houses on Stanton St. for Geo. A. Brooks; and for five houses on Black St., for S. L. Crumay.——Alden & Harlow, 314 4th Ave. have received bids for a $40,000 residence on Linden Ave., for D. McK. Lloyd.——It is stated the Carnegie Co. will erect a large office building directly in the rear of the Carnegie Building.

WILKINSBURG, PA.—It is reported that a number of New York capitalists intend to erect a large apartment house here to cost about $400,000.

ATLANTA, GA.—Reports state that the plans of Adler, Corthell & Daniel, for the new union passenger station, have been accepted.

HAWKINSVILLE, GA.—It is reported that the plans of A. J. Bryan Co., English-American Bldg., Atlanta, Ga., for the new $15,000 jail here have been adopted, and bids will be asked soon.

KNOXVILLE, TENN.—Reports state that F. P. Milburn, Charlotte, N. C., is completing plans for the new passenger station for the Southern Ry., and that work will be started as soon as the weather permits.

COLUMBUS, O.—It is stated that Yost & Packard, Y. M. C. A. Bldg., will receive bids until Nov. 20 for the erection of the West Virginia Miners' Association's hospital building.——J. M. Freese, Wesley Block, is preparing plans for a four-story brick hotel on Town St. for J. W. Dusenberg to cost $40,000.

GRAND RAPIDS, MICH.—Press reports state that W. G. Robinson, New Houseman Block, has reported the county jail as unsafe.

HANCOCK, MICH.—Charlton, Gilbert & Demar, First National Bank Bldg., Milwaukee, Wis., have prepared plans for a 100 × 160 ft. hotel building, to cost $5,000, for the Hancock Hotel Association.

CHICAGO, ILL.—Plans have been prepared by O. W. Marble, 145 La Salle St., for an $80,000 48-room apartment house at 3945 Ellis Ave., for S. & G. Gans; by L. M. Mitchell, for an 18-room apartment house, 5626 to 5638 Calumet Ave., for B. F. George, cost $50,000.——The following bids were received for furnishing and adjusting four ⅝-in. iron cables and ¼-in. operating cables in the three elevators of the Criminal Court Building; also for furnishing ⅝ × 14-in. and ¼ × 12-in. carbons for arc lights: Otis Elevator Co., Chicago, $648; John A. Roebeling & Son Co., Chicago, $653; Gallagher & Speck, Chicago, $655; Elevator Supply Co., Chicago, $670.

CHICAGO, ILL.—A new 12-story hotel is to be put up at Monroe and State Sts. by a company of New York capitalists, to cost $500,000. C. H. Holmes, of New York, is the agent.——Hayman & Davis will erect a new theatre on Jackson Boulevard to cost about $250,000.

OCONTO, WIS.—Bids will be received, according to reports, for the new armory. Address Major Lee, Lee's Studio.

KANSAS CITY, MO.—The six-story building at 6th and Main Sts. was destroyed by fire Nov. 5; loss, about $200,000.——It is stated that plans have been prepared by Root & Siemens, 616 American Bank Bldg., for the new $85,000 labor temple at 10th St. and Baltimore Ave. Address F. A. Allen and J. E. Oliver, 306 Deardoff Bldg.

PRINCETON, MO.—It is stated that Mercer county will again vote on the question of building a new court house.

ST. LOUIS, MO.—A meeting of the board of commissioners will be held at Laclede Hotel, Nov. 9, for the purpose of considering the bids of several towns for a site for new insane asylum No. 4. Chairman Allen and Secretary Berry may be addressed.——The jury which met last week to select plans for the new buildings for Washington University, have selected the plans of Cope & Stewardson, 320 Walnut St., Philadelphia, Pa., according to reports.

LITTLE ROCK, ARK.—Fire damaged the building occupied by the C. J. C. Lincoln Drug Co., Nov. 4, causing a loss of $150,000.

AUSTIN, TEX.—The school board is reported to have let the contract for erecting the new $50,000 school house to Wattington & Ledbetter.

FORT WORTH, TEX.—Charles Onthwein's Sons, of St. Louis, Mo., are said to be about to start work on a grain elevator on the North Side, near the Rock Island and Denver tracks, with a capacity of 250,000 bushels a day.

SPOKANE, WASH.—Reports state that Clark & Sweeney have purchased a plot 60 × 142 ft. on Washington St., on which they will build a three-story brick office building, to cost about $40,000.

TACOMA, WASH.—The Northern Pacific R. R. has purchased the water front privileges from the Tacoma Land Co., and will erect a large grain elevator.

ASHLAND, ORE.—Bids are asked until Dec. 1 for erecting a 2-story school building. G. W. Trefren, Clk.

ALAMEDA, CAL.—A site on Lafayette Square is reported to have been chosen for the public library offered by Andrew Carnegie.

GRASS VALLEY, CAL.—W. A. Sleep, Henry Luke and J. C. Tyrrell have been appointed a committee to attend to advertising and receiving bids for a $20,000 lodge room, according to reports.

MARTINEZ, CAL.—The supervisors are reported as about to select the plans for the new court house.

OAKLAND, CAL.—The board of supervisors has narrowed the number of plans for the new court house down to three and will soon make the final selection.

SAN FRANCISCO, CAL.—A committee consisting of A. P. Spreckles, N. Ohlandt and H. Fortman was appointed by the German Benevolent Society at a meeting in Druid's Hall, 413 Sutter St., on Oct. 26, to secure plans for a new hospital building, to cost about $25,000.——The plans of Martens & Coffey, 819 Market St., have been selected by the board of supervisors, for the city and county hospital building.

ROSWELL, N. MEX.—The question of issuing $15,000 of 6% school bonds will be voted on Nov. 21. B. F. Hammett, Clerk.

TORONTO, ONT.—Reports state that it is proposed to build a new technical school, to cost about $100,000.

LONDON, ENGLAND.—The Metropolitan Asylums Board received the following bids last month for erecting the Tooting Bee Asylum: W. Johnson & Co., Ltd., Wandsworth Common, S. W. (accepted), $1,022,740; J. Carmichael, Trinity Road, Wandsworth, S. W., $1,036,750; Spencer, Santo & Co., Ltd., Earl St., Westminster, S. W., $1,051,500; McCormick & Sons, Northampton St., Essex Road, N., $1,086,110; W. H. Lorden & Son, Trinity Road, Upper Tooting, S. W., $1,094,440; Leslie & Co., Ltd., Kensington Square, W., $1,923,835; C. Wall, Lots Road, Chelsea, S. W., $1,229,360; Martin, Wells & Co., Auckland St., Vauxhall, S. E., $1,240,000; J. Shillitoe & Son, Bury St. Edmunds, $1,256,715. Architects' revised estimate, $1,050,000.

SOUTHAMPTON, ENGLAND.—Bids are asked until Nov. 20 for constructing a workhouse infirmary to accommodate about 300 patients. Bond, $30,000. W. H. Mitchell, Son & Gutteridge, Archs., 9 Portland St., Southampton; D. P. Gwinllim, Clk.

BERLIN, GERMANY.—The government, it is reported, has ordered the construction of a new Royal Library for the Academies of Sciences and Arts on the Unterden-Linden. The cost will be about $600,000.

WATER-WORKS.

BRISTOL, VT.—It is reported that the Rock Springs Water Co. will extend its works. Address N. H. Munsell, Malone, N. Y.

GOWANDA, N. Y.—The state lunacy commission, Albany, has approved plans for a better water supply for the Gowanda Homeopathic Hospital. The air-lift system will be used, according to reports.

LIMA, N. Y.—The contracts for various supplies and construction for the proposed works to cost $23,000 have been let to the following: Hydrants, valves, etc., Rensselaer Mfg. Co., Troy, N. Y.; pump and gasoline engines, Gould Mfg. Co., Seneca Falls, N. Y.; pipe laying, reser-

voir and well, Jehiel Vaughn, Stamford, N. Y. J. F. Witmer, Engr., Ellicott Bldg., Buffalo; H. N. Thompson, Cy. Clk.

ATLANTIC CITY, N. J.—The president of the board of water commissioners writes us that the ordinance passed second reading Nov. 2 for laying a new 20-in. main from the pumping station to the city, a distance of five miles. W. C. Hawley, Supt.

FORT MOTT, N. J.—Bids are asked by the Quartermaster U. S. A., until Nov. 17 for furnishing the materials and for sinking an artesian well at Fort Mott.

IRVINGTON, N. J.—The Citizens' Water Co. has been organized with a capital of $50,000 by Carl Mueller, Town Engr.; Otto Heintz and Fred. Stone.

PAULSBORO, N. J.—W. J. Adamson has been granted a franchise for laying water mains in this town.

HARRISBURG, PA.—Reports state that this city on Nov. 7 defeated the proposition to issue $75,000 in bonds for new pumping machinery.

LANCASTER, PA.—This city on Nov. 7 defeated the proposition to issue $382,600 in bonds for a filter plant and otherwise improving the works.

MILROY, PA.—L. F. Freaster, Ner Thompson and Howard Culp are reported as about to apply to the legislature for a charter for a company to furnish water to Milroy and Lewistown.

PHILADELPHIA, PA.—This city by a majority of about 100,000 voted Nov. 7 in favor of the $12,000,000 loan bill for improvements to the water-works.

POINT MARION, PA.—The Springhill Water Co. has been incorporated with a capital stock of $1,200 by A. S. Maple, of Point Marion, and J. G. Mayer, of Jeannette.

TYRONE, PA.—The city has been restrained, on application of the Tyrone Gas & Water Co., from purchasing the Hundred Springs for a site for a reservoir for the proposed municipal works. The question of purchasing the works was carried at the election Nov. 7.

BALTIMORE, MD.—Bids are asked until Nov. 25 for constructing a water-works plant for the Tuxedo & Embla Parks Water & Electric Light Co., as stated in our advertising columns. H. A. Leonard, V. P. and Gen. Mgr., 2 St Paul St.

KENSINGTON, MD.—The question of putting in works to cost $15,000 is being considered by J. Wilson Townsend, W. E. Brown and W. T. Hutchinson, the committee recently appointed by B. H. Warner. Chas. S. York, 1526 East Biddle St., Baltimore, has been engaged as engineer for the construction.

ELKINS, W. VA.—This place voted Oct. 26 to issue $30,000 in bonds for works. It is stated work will soon be begun. D. G. Adelsberger, Engr., 722 Pennsylvania Ave., Baltimore, writes that the works will have a steam pump, 4, 6 and 8-in. pipe, hydrants, valves, a 60,000 gallon cypress tank, reservoir, etc. Prices of materials are wanted at once.

BASTROP, LA.—The contract for works and an electric plant has been let to R. M. Adams, at $9,000.

CONNEAUT, O.—T. C. Howe, receiver for the water company, Garfield Bldg., Cleveland, O., writes us that it is proposed to lay two miles of 6-in. mains. The modification of the water supply all depends on the agreement of the company with the village council.

COVINGTON, O.—C. O. Lucas, Greenville, O., has submitted plans for works to cost $20,000, and for an electric light plant to cost $5,000.

MARTIN'S FERRY, O.—We are informed that no satisfactory bids were received Nov. 2 for a 4,000,000-gallon vertical compound condensing high-duty pumping engine.

GOSHEN, IND.—The question of a new pumping engine to cost about $12,000 is being considered. The new foundation will cost about $6,000.

WALDRON, IND.—The Cold Spring, Natural Gas, Oil & Water Co. has been incorporated with a capital stock of $2,500 by H. H. Burns, J. Parks and W. Lantz.

GRAND RAPIDS, MICH.—Sam'l M. Gray, Providence, R. I., and Allen Hazen, 220 Broadway, New York, are preparing their report for a better water supply.

CARBONDALE, ILL.—The council is reported to have accepted the plans and specifications for works and an electric plant prepared by John J. Hainsworth, Indianapolis, Ind.

KENNEY, ILL.—Bids are asked by the city clerk until Nov. 15 for constructing works to cost $10,000. Address E. B. Mitchell, National Bank Bldg., Clinton, Ill.

GREEN BAY, WIS.—The contract for a shed over the reservoir to be 72 × 190 ft. long has been let to Geo. Georgensen, of this city.

RACINE, WIS.—Mayor Higgins has appointed Chas. H. Lee, B. D. Blake, Otis W. Johnson and five aldermen as a committee to investigate the advisability of purchasing the works.

MARSHALLTOWN, IA.—H. J. Benson, Chn. Com., writes us that nothing will be done until spring regarding an increased water supply.

OSCEOLA, IA.—J. F. McAuley, Mayor, writes us that this place will vote Nov. 10 on the question of a water supply for deep wells, and a light plant. Population, 3,100.

IOLA, KAN.—The question of new works is reported as being considered.

FARMERSVILLE, TEX.—This place recently voted to issue $20,000 in bonds for works, according to reports.

LORENA, TEX.—The Lorena Water Co. has been incorporated with a capital stock of $5,000 by J. W. Whitsett and Benj. Hatch.

ROCKWALL, TEX.—D. C. Fondsen, Mayor, writes us that this place has defeated the proposition to issue bonds for works. Population, 2,000.

WHITEWRIGHT, TEX.—This place has voted to issue $20,000 in bonds for works. J. H. Truett, Cy. Attorney.

STILLWATER, OKLA.—We are informed that this place is about to put in works. Estimated cost, about $25,000. Population, 2,500. Prof. R. E. Chandler, Consult. Engr., Stillwater; W. R. McGeorge, Mayor. Dr. M. M. Dennison and H. Bahntge are on the committee.

COLORADO SPRINGS, COLO.—The city authorities are making experiments for an increased water supply.

CRIPPLE CREEK, COLO.—The Cripple Creek Pipe Line & Water Co. has been incorporated with a capital stock of $100,000 by Henry B. Smith and S. A. Hill.

DENVER, COLO.—This city on Nov. 7 voted in favor of issuing $4,700,000 for the purchase or construction of gravity works. Frank Kratzer, Cy. Clk.

PHOENIX, ARIZ.—The question of the city purchasing the works of the Phoenix Water Co. has been under consideration, but the council has decided to call an election to vote on the question of issuing $315,000 for new works and a sewerage system, the first to cost about $200,000. Abs Hagen, Engr., Los Angeles, Cal.

WALLA WALLA, WASH.—This city voted Oct. 28 in favor of the municipal ownership of the works, to be secured either by purchase for $250,000 or by the construction of new works.

AZUSA, CAL.—The city trustees have accepted the proposition of Messrs. Slauson and Macnell for the purchase by the city of the works.

LORDSBURG, CAL.—The La Verne Land & Water Co. has been incorporated with a capital stock of $25,000 by R. A. Wallace, J. F. Cumberland, B. B. Brown and C. E. Straight.

SACRAMENTO, CAL.—Tests for an increased water supply are to be made at once, for which an expert will be engaged. Gen. L. Tozer, Chn. Com.

SAN LUIS OBISPO, CAL.—The trustees are reported as arranging for the sale of $80,000 in bonds for works and $36,000 for sewers, the bond election having been declared legal. J. A. Goodrich, Cy. Clk.

SONOMA, CAL.—Otto von Geldern has submitted plans and estimates for works to cost $19,170. Address City Trustees Davis and Scipp.

WHITTIER, CAL.—It is proposed to lay larger water mains at a cost of about $5,000.

GRAND FORKS, B. C.—Reports state that a new pumping engine and a steel tank of 200,000 gallons will be wanted for the improvements to the works. B. C. Rickert, Engr., Spokane, Wash.

LEVIS, QUE.—Propositions and plans are wanted until Jan. 1 for furnishing this place with works and a water supply. The designer of the best plan will receive $1,000, and that for the second best $500. Population (1890), 7,500. J. Edmond Roy, Mayor; Flavien Roy, Secy.-Treas.

AYLMER, ONT.—Alex. Milne, Town Engr., writes us that wells for an increased water supply are being drilled. No definite plans for extensions will be adopted until results of wells are ascertained. A stand-pipe will be erected and several additions and changes to the mains will be made. Meters may possibly be used. No contracts will be let this year.

HALIFAX, N. S.—F. W. W. Doane, Cy. Engr., writes us that no improvements to the works are contemplated. Mr. Doane has recommended a more general use of water meters to stop water waste, but nothing else except ordinary extensions. In our issue of Oct. 5, by a typographical error, an item about improvements to the water supply for Halifax, England, was printed Halifax, N. S. The plans for the improvements to Halifax, Eng., works which will cost about $1,000,000, are being prepared by G. H. Hill & Son, 3 Victoria St., S. W., London, and Manchester, Eng.

BODMIN, ENG.—Bids are asked until Nov. 15 for erecting works. Population, 5,151. W. J. Jenkins, Engr.

CLACTON-ON-SEA, ENGLAND.—Bids are asked until Nov. 15 for furnishing and laying about 7¼ miles of 11-in. cast-iron mains between Great Bentley and this place. John Taylor Sons & Santo Crimp, Engrs., 27 Great George St., Westminster, London; G. T. Lewis, Clk.

RUNCORN, ENGLAND.—Bids are asked until Nov. 17 for constructing works, to include a brick engine house, lined brick sump, Crossley's 4-HP. "Otto" gas engine, 16-in. stroke; 6-in. double-action ram pump, 8-in. stroke; air vessels, valves, pipes and connections; 6-in. and 3-in. cast-iron mains, with the necessary valves, hydrants, etc.; covered brick reservoir of 50,000 gallons capacity. Geo. F. Ashton, Clk. Council.

ST. AGNES (CORNWALL), ENG.—Plans, etc., are asked until Nov. 30 for works and a water supply for this place. First prize, $125. John Angwin, Clk.

IRRIGATION.

NEW COMPANIES.—Romero Canal Co., Denver, Colo.; $50,000; H. T. Sheriff, E. S. Morrill, Jr.

Socorro County Land & Cattle Co., Socorro, New Mexico; $100,000; C. T. Brown, J. G. Fitch, J. E. Smith, Socorro.

New Bucker Ditch Co., Denver, Colo.; $40,000; Alex. Walker, R. W. Diorney, Fritz Neimeyer, And. McMillen, Jas. Collin, Weld county.

Lorena Water Co., Lorena, Tex.; $5,000; J. W. Whitsell, B. Hatch, D. Hatch.

SEWERAGE.

NEW BRITAIN, CONN.—Reports state that the scheme for the proposed trunk sewer to Wallingford Plains, which will accommodate more than half a dozen towns along its line, is acceptable to the mayor.

BUFFALO, N. Y.—Bids are asked until Nov. 15 for constructing a retaining wall across the head of Evans Slip on Erie St. and for constructing an 18, 15 and 12-in. pipe sewer in Harriett St. R. G. Parsons, Secy. Bd. Pub. Wks. ——A plant is proposed whereby about 75% of the sewage of the city, now emptied into the Erie and Hamburg canals, can be pumped into the Niagara River.

NORTH TONAWANDA, N. Y.—This city voted Nov. 4 to issue $30,000 in bonds for new sewers.

ELIZABETH, N. J.—It is proposed to build a 15-mile sewer from the northeastern part of Essex county through Elizabeth to Staten Island Sound. It will probably be 66 ins. in diameter part of the way and 33 ins. the rest.——Francis Collingwood, Elizabeth, has been engaged as consulting engineer in the proposed tidewater sewer scheme. The council has decided to resist further use of the river for sewer purposes. Major Collins, Chn. Com.

JERSEY CITY, N. J.—Bids are asked until Nov. 14 for constructing 800 ft. of 48-in. brick and 200 ft. of 18-in. pipe sewers, etc. J. S. Nolan, Chn. Sewer Com.

WEST HOBOKEN, N. J.—Bids are asked until Nov. 15 for constructing a sewer in Hudson Ave. J. P. McMahon, Town Clk.

HAZLETON, PA.—Reports state that plans for a new system are being prepared by the city engineer.

TARBORO, N. C.—Bids are asked until Nov. 28 for furnishing the pipe, etc., and for constructing sewers, as stated in our advertising columns. W. A. Weddell, Secy.

COLUMBUS, GA.—M. M. Moore, Cy. Clk., writes us that no action has yet been taken on the report for the proposed system, submitted by the committee Sept. 6, and it is not likely any will soon be taken. The main sewers will cost $58,000 and the system for the south of 17th St. $137,000.

GREENVILLE, MISS.—Reports state that plans and specifications will probably soon be wanted for a system to cost about $65,000. J. M. Lee, Cy. Clk.

ALLIANCE, O.—Reports state that a new company was organized by A. B. Love, J. H. McConnell and O. W. Pfouts, Cy. Engr., for manufacturing and operating sewage disposal plants.

CLEVELAND, O.—Jas. Ritchie, Ch. Engr., writes us that the Lake St. intercepting sewer plans are ready for approval by the board of control. Bonds authorized for construction of same will be sold as needed. Expect to commence work on same in spring of 1900.

LIMA, O.—It is proposed to issue $100,000 of sewer bonds for extending and improving the system.

CHICAGO, ILL.—The city officials are reported as securing information regarding the employment of day labor on sections G and H of the South Side sewer, to cost about $900,000.

CHICAGO, ILL.—Local papers state that the drainage board will soon ask for bids for furnishing and erecting three pumps at the 39th St. sewer tunnel. The pumps will have a capacity of 120,000 cu. ft. a minute, and will cost about $300,000. Address Alex. Jones, Trustee Drainage Bd.

ESTHERVILLE, IA.—The city clerk writes us that the contract for 4,000 ft. of 12-in. pipe sewer, average cut 11 ft., has been let to Wm. Hornabin, Iowa City, at $4,000.

OMAHA, NEB.—Bids are asked until Nov. 10 for constructing pipe sewers in two streets. Wm. Coburn, Secy.

WICHITA, KAN.—Bids are asked until about Dec. 15 for about 13,700 ft. of 15 to 6-in. pipe sewer, eight flush tanks, 67 manholes, etc., according to reports. Amos McLain, Cy. Clk.

NEWPORT, ARK.—Mayor F. J. Watson writes that S. J. Mitchell, Asst. Cy. Engr., of Kansas City, Mo., will soon submit plans for a system and that bids will shortly be asked.

DALLAS, TEX.—The council is reported to have accepted the bid of Parlin & Orendorff to build a garbage crematory, to cost about $11,500.

EL RENO, OKLA.—The question of issuing $7,000 of sewer bonds was to have been voted on Nov. 7. Address Mayor Hensley and City Engineer Brown.

ARDMORE, IND. TER.—Plans for a system to cost about $22,000 are reported to have been prepared by H. H. Hendershot, of Wichita, Kan.

DURANT, IND. TER.—Reports state that a system will be built next year.

FLAGSTAFF, ARIZ.—Reports state that Cornish & Williams have the contract for sewer extensions for the Flagstaff Drainage & Improvement Co.

PHOENIX, ARIZ.—The council will be asked to call an election to vote on the question of issuing $315,000 in bonds, about $150,000 of which is to be used for a system and the remainder for water-works.

SPOKANE, WASH.—This city voted Oct. 28 to issue $100,000 in bonds for a system and $250,000 for works. The system will consist of 38,000 ft. of 6-in., 40,000 ft. of 8-in., 6,420 ft. of 10-in., 4,150 ft. of 12-in., 1,900 ft. of 14-in., 2,300 ft. of 16-in. and 1,940 ft. of 20-in. pipe, etc.

MERCED, CAL.—H. H. Hendershot, Wichita, Kan., and R. H. Goodwin, are reported to have submitted propositions to prepare plans for the system.

SAN LUIS OBISPO, CAL.—Arrangements are reported as being made for the sale of $36,000 of bonds, recently voted for the proposed system. J. A. Goodrich, Cy. Clk.

ROSWELL, N. MEX.—This place on Oct. 19 defeated the proposition to issue $27,000 in bonds for a system.

VANCOUVER, B. C.—The city clerk writes us that no bids have been asked for the sewage disposal works and that probably none will be called until spring. Thos. H. Tracy, Cy. Engr.

SMITH'S FALLS, ONT.—The contract for constructing a sewer about 4,000 ft. long and for laying 3,500 ft. of water mains has been let to Chas. T. Hookway, Syracuse, N. Y., at $17,590. John Burns, Ottawa, Ont., submitted the highest bid at $25,000. Further improvements will probably soon be made. B. E. Sparham, Town Clk.; Willis Chipman, Engr., 103 Bay St., Toronto.

MORECAMBE, ENGLAND.—Bids are asked until Nov. 15 for about 12 miles of sewers, storage culverts, septic tanks, pumping stations, etc., which we are informed will cost over $300,000. Beesley, Son & Nichols, Engrs., 11 Victoria St., Westminster, London, S. W.; Jno. Bond, Surv. District Council.

SYDNEY, N. S. W.—The Clyde Engineering Co., Sydney, N. S. W., and Glasgow, Scotland, is reported to have been awarded the contract for furnishing the sewage pumps. The Prindle Pump Co., 120 Liberty St., New York, also submitted a bid. The contract for the electrical machinery has been let to the General Electric Co., Schenectady, N. Y., at about $45,000.

GARBAGE DISPOSAL—STREET CLEANING

WATERBURY, CONN.—It is stated that $10,000 has been asked for garbage disposal for 1900.

JERSEY CITY, N. J.—The chief engineer has been directed to prepare specifications for street cleaning and garbage removal for 1900. It is probable that bids will be received shortly.

STREETS AND ROADS.

BOSTON, MASS.—Bids are asked until Nov. 13 for macadamizing Callender St. Check, $300. Benj. W. Wells, Supt. Sts.

ROCHESTER, N. Y.—The council proposes to pave a portion of Ames St. with asphalt, at a cost of $35,000. Peter Sheridan, Cy. Clk.

RAHWAY, N. J.—Reports state that the paving of Union St. is being discussed.

PHILADELPHIA, PA.—Bids are asked until Nov. 14 for furnishing brick paving in the navy yard, League Island. Paymaster-General A. S. Kenny, U. S. N., Navy Pay Office, Philadelphia.

LAKE CITY, FLA.—W. M. Ives, Cy. Clk., writes that the contract for paving a mile of Marion St. has been let to E. L. Snowden, Lake City.

CLEVELAND, O.—Street improvements on seven streets are reported to have been held up by a decision rendered by the supreme court recently.

PLEASANT RIDGE, O.—Bids are asked until Nov. 14 for constructing a cement sidewalk on Montgomery road. Hosbrook & Ferris, Engrs., 420 Pike Bldg., Cincinnati, O.

SULLIVAN, IND.—Reports state that the county commissioners have contracted for 12 miles of gravel road in Gill township.

ALTON, ILL.—Engineer Geo. Dickson has, according to reports, finished his survey and reports that more than half the frontage on a certain street is represented in the petition. This means that the street will soon be paved.

CHICAGO, ILL.—Reports state that a company of Indiana paving contractors will bid on brick paving next season. They claim to be able to save about 65 cts. a sq. yd.

KANSAS CITY, KAN.—The question of building a 150-ft. drive from the 4th St. viaduct, Kansas City, Mo., to the foot of Minnesota Ave., is being agitated again, according to reports.

KANSAS CITY, MO.—Bids are asked until Nov. 11 for certain asphalt paving and for building sidewalks in certain streets. H. A. Wise, Cy. Engr.

ST. JOSEPH, MO.—The aldermen are reported to be in favor of the plan to resurface with asphalt all the city streets, at a cost of about $100,000.

DENVER, COLO.—The board of public works has taken up the question of macadamizing Grant and Logan Aves.

SAN FRANCISCO, CAL.—It will be recommended to the board of supervisors to ask for bids for repaving streets, for which an appropriation of $75,000 has been made.

SPOKANE, WASH.—City Engineer O. A. Weile is reported to be preparing plans for grading Fifth Ave.

MANUFACTURING PLANTS.

WATERVILLE, ME.—Plans are being prepared, according to reports, for a four-set woolen mill to be 80×120 ft. wood and three stories high. Thos. W. Sampson, Mgr. Vassalboro Woolen Mills, is interested.

WOONSOCKET, R. I.—The Lafayette Worsted Co., which was recently incorporated with a capital of $300,000 by P. Mali of H. W. T. Mali & Co., Irvan Simonis, a woolen manufacturer of Verviers, Belgium, and Auguste Lepontle, of Roubaix, France, is reported to be building a worsted spinning mill.

WILLIMANTIC, CONN.—Bids have been received for the new finishing mill for the Willimantic American Thread Co. to be 273x100 ft. and three stories high.

CANONSBURG, PA.—C. C. Johnson, C. W. Campbell and others will build a pottery on the five acres of land they recently bought, according to reports.

HAZELTON, PA.—Reports state that the Lehigh Valley Co. will build another breaker, which will employ 1,000 men.

LEBANON, PA.—The American Iron & Steel Mfg. Co., it is said, will erect a modern steel plant here.

WILMINGTON, DEL.—The Diamond State Steel Co., it is stated, has applied for a permit to erect a building 15 x 437 ft.

CHILHOWIE, VA.—It is reported that the Chilhowie Lumber Co. wants to buy a complete circular saw mill of 50,000 ft. capacity; a small locomotive and several cars for logging purposes, and an incline outfit for handling lumber over mountain.

ANDERSON, S. C.—The Anderson Cottom Mills have decided to enlarge their plant by adding 6,000 spindles and 200 looms, according to reports.

CAMDEN, S. C.—P. T. Villepigue is reported to have been elected to succeed Col. E. M. Boykin, who recently resigned the presidency of the Camden Cotton Mills.

ATHENS, GA.—Press reports state that the charter for the new cotton mill to be built here is being prepared; the capital will be $200,000, and the incorporators are Myer Stern, J. M. Smith and J. White. Work on the buildings will probably soon be begun.

ATLANTA, GA.—R. J. Griffin, Pres. Hogansville Mfg. Co., writes us that everything in the machinery line for the new mill is under contract, except the looms, force pump and freight elevators. The mill when completed will cost about $160,000. Brown Bros., Contractors, Atlanta; A. F. Walker, Arch., Atlanta.

NEWNAN, GA.—It is stated that a subscription og $250,000 will shortly be raised for a new cotton mill here.

THOMASTON, GA.—A new yarn and cotton mill will soon be started here, $125,000 having been subscribed for the work. R. A. Matthews is said to be interested.

MONROE, LA.—A committee composed of F. B. Stubbs, B. J. Sugar, W. B. Reilly and A. A. Gunby has been appointed to raise the balance of the $50,000 subscription for the new mill for the Ouachita Cotton Mills, according to reports.

OPELIKA, ALA.—It is stated that Capt. J. L. Dean has raised nearly all of the $100,000 for the new cotton factory.

NASHVILLE, TENN.—Reports state that a new phosphate works will be built at a cost of about $150,000. W. H. Robinson, representing eastern capitalists, is negotiating for a site.——A charter was applied for by the Nashville Hosiery Mills, with a capital of $100,000. J. H. Thomas, Dr. Wm. Morrow, and J. B. Carr are the incorporators.

CHICAGO, ILL.—It is stated that Geo. P. Bent, Bent Block, wants to locate a piano factory within 50 miles of Chicago.

WAUKEGAN, ILL.—A portion of the works of the Washburn & Moen Wire Works was destroyed by fire Nov. 4, causing a reported loss of about $500,000. A later report states that new buildings, etc., will be erected at a cost of about $1,500,000.

MILWAUKEE, WIS.—The Christensen Engineering Co. is reported to be having plans drawn for a one-story 80x200 ft. foundry and a 200x400 ft. two-story brick factory, on Park Place, to cost about $100,000.

ST. PAUL, MINN.—It is reported that President Swift and Treasurer Carton intend to make improvements to the Swift packing plant, at a cost of about $100,000.

BEAUMONT, TEX.—A plan is reported to be on foot for the establishment of a shipyard for small boats.

COLORADO SPRINGS, COLO.—This place has decided to give the Dorcas Mining, Milling & Development Co. 20 acres of land on which to build its cyanide mills.

SAN FRANCISCO, CAL.—Chief Engineer Geo. W. Melville, U. S. N., Washington, D. C., has asked for $50,000 for a new machine shop at the Mare Island navy yard, according to reports.

CAPE TOWN, SOUTH AFRICA.—H. Steinmann, 220 Broadway, New York, N. Y., has been engaged by the South African Breweries Co., Ltd., of London, England, to prepare plans, etc., for a brewing plant to be erected here at a cost of about $300,000. The building will be 120x270 ft., and will be capable of turning out 100,000 bbls. It is said that the machinery will be purchased in the U. S. Mr. Steinmann is also said to be preparing plans for two breweries in Japan, one to have a capacity for 100,000 bbls. and the other a capacity of 50,000 bbls.

GAS PLANTS.

JERSEY CITY, N. J.—A $10,500,000 gas company is reported as being formed, consolidating the People's Gas Light Co., Consumers' Gas Co., Jersey City Gas Light Co. of Jersey City; Hudson County Gas Light Co. of Hoboken, and the Bayonne & Greenville Gas Light Co.

PASSAIC, N. J.—It is reported that the Passaic Equitable Gas Co., formed by ex-Mayor Andrew McLean with a capital of $100,000, has asked for a franchise. The company is to use a new process invented by Dr. J. W. Chisholm, Chicago, and will sell gas at 50 cts. a 1,000 ft.

BELINGTON, W. VA.—A gas well has been located at Jones Station, near here, and Senator S. B. Elkins will put down a well and carry the gas to Elkins, W. Va., according to reports.

NEW COMPANIES.—Buckhannon Gas Co., Buffalo, N. Y.; $5,000, with $500 paid in; Geo. F. Forman, Jas. L. Connely, Clifford R. Hawkins.

Nazareth Illuminating Gas Co., Nazareth, Pa.; $10,000, with $1,000 paid in; M. F. Swartz, C. Miller, L. C. Williams, Nazareth.

The Anaconda Oil Co., Salem, Ore.; $500,000; F. J. Horswill, John S. Inglis, C. H. Morrell.

Eagle Oil Co., Salem, Ore.; $100,000; Joseph Hyman.

MISCELLANEOUS CONTRACTS.

FILLING.—Pittsburg, Pa.—Bids are asked until Nov. 11 for filling approaches to three bridges. W. E. Thompson, County Compt.

COAL SHAFT.—Alderson, Ind. Ter.—Bids are asked for sinking a 400-ft. 11 x 24 ft. shaft. F. Bache, Pres. McAlester Coal Co.

LEVEE.—Bloomfield, Mo.—Bids are asked until Nov. 16 for building a levee and digging a ditch across Lock Creek. M. O. Reed, Road Comr.

RACE TRACK.—Menominee, Mich.—The Menominee Agricultural Society will build a $40,000 race track at Juttner, according to reports.

TELEPHONE LINE.—Fort Stanton, N. Mex.—Bids are asked until Nov. 20 for a telephone line. J. O. Cobb, Marine Hospital Service, Fort Stanton.

TUNNEL.—Hazleton, Pa.—Chas. Kehoe has been awarded the contract for driving the tunnel to drain Beaver Meadow Mines, according to reports.

LICENSE PLATES.—New Orleans, La.—Bids are asked until Nov. 13 for furnishing license plates, dog tags, etc.; check $50. W. S. Douglass, Comptroller.

TELEPHONE.—Houston, Tex.—The Southwestern Telegraph & Telephone Co. is reported to be considering the making of important changes in its system.

LEVEE.—Vicksburg, Miss.—Bids are asked by Col. G. McDerby, U. S. Engr., New Orleans, until Nov. 10, for about 2,000,000 cu. yds. of levee enlargements.

RECREATION PIER.—Hoboken, N. J.—The Thirteenth St. Improvement Association has approved the plan to build a recreation pier at the foot of 13th St.

QUAY.—St. Malo, France.—U.S. Consul Thackara, Havre, France, reports that about $193,000 will be spent by this municipality in building a stone quay along a basin.

BREAKWATER.—North Bay, Ingonish, N. S.—Bids are asked until Nov. 17 for constructing a breakwater; check, $3,000. E. F. E. Roy, Secy. Dept. Pub. Wks., Ottawa, Ont.

PARK IMPROVEMENTS.—Cleveland, O.—It is stated that the contract for park improvements will be let as soon as the $500,000 of park bonds, recently authorized, are sold.

CANAL.—Black River Falls, Wis.—A canal is proposed to drain about 55,000 acres in Juneau county. It will be about 100 miles in length, according to reports. Address Judge Wyman.

CHANNEL WORK.—Oakland Harbor, Cal.—Bids are asked until Dec. 26 for a diverting channel in Oakland Harbor. Maj. W. H. Heuer, U. S. Engr., Flood Bldg., San Francisco.

STONE WALL.—San Francisco, Cal.—Bids are asked until Dec. 1 for constructing a stone wall at the Presidio of San Francisco. Capt. O. F. Long, Q.-M. Dept., 36 New Montgomery St.

FORTIFICATIONS.—Porto Rico and Hawaii.—Gen. J. M. Wilson, Ch. U. S. Engrs., Washington, D. C., has completed plans for fortifying San Juan, P. R.; Honolulu, H. I., and Pearl Harbor, Samoa.

TIMBER.—Algoma District, Ont.—It is stated that Jas. S. Galloway, Hillsdale, Mich., has purchased about 40 sq. miles of timber land in the Algoma District for $300,000 from G. W. Peck, Cleveland, O.

CANAL CONSTRUCTION.—Chicago, Ill.—Bids are asked by Maj. W. L. Marshall, U. S. Engrs., 1637 Indiana Ave., until Dec. 2 for constructing about three miles of canal, as stated in our advertising columns.

PARK.—Fredericksburg, Va.—The Fredericksburg National Park Commission has submitted plans to the Secretary of War for building a park 12 miles square on the south side of the Rappahannock River.

PIERS.—Hoboken, N. J.—The Hamburg-American Line Terminal & Navigation Co., recently incorporated, and controlled by the Hamburg-American Line, has purchased 250 ft. of water front and will build five new piers, according to reports.

WHARF.—Brooklyn, N. Y.—Reports state that the East India Brewing Co. has obtained an injunction against the Brooklyn Wharf & Warehouse Co. preventing it from extending the Atlantic Dock, stating that it would interfere with its apparatus.

TELEPHONE.—New York, N. Y.—Reports state that the People's Telephone Corporation has secured a permit to lay its wires in New York. Capital stock, $5,000,000. Silas B. Dutcher, Darwin R. James, Pres., and Geo. E. L. Molineaux are interested.

road also intends to build a union station at Manhattan Junction, East New York, for both elevated and surface roads, and also a loop at the same place for the Kings County and Brooklyn roads.

CEMENT.—League Island Navy Yard, Pa.—The following bids were received Oct. 31 at the navy department for furnishing 3,200 bags of cement at the League Island Navy Yard, Pa.: A. G. Hanna & Co., 138 Chestnut St., Philadelphia, $1,568; Walter T. Bradley Co., 9th and Girard Ave., Philadelphia, $1,688; Fiske Bros. Refining Co., 59 Water St., New York, $2,080; Knickerbocker Lime Co., 366 No. 24th St., Philadelphia, $1,760; Wm. J. Donaldson, 505 Betz Bldg., Philadelphia, $1,600.

DRY-DOCK, ETC.—Noumea, New Caledonia.—U. S. Commercial Agent Wolff reports that the governor is authority for the statement that $700,000 will be spent for a dry-dock here. A stone quay wall and an electric plant are now being built by the city, and propositions for a market hall were being considered in August. The Caledonia Copper Mining Co., it is stated, was recently formed in London with a capital stock of $3,700,000 to develop the Pilou Mines. Charles Louxias, Mayor.

TELEPHONE.—New York, N. Y.—The Continental Telegraph, Telephone & Cable Co. has opened an office in the American Surety Bldg. It will build and operate only in New Jersey. The Telephone, Telegraph & Cable Co. of America will soon be incorporated to operate in the entire territory east of the Mississippi River. These companies will build lines at once, as well as to buy up other companies. The capital stock of the latter is $25,000,000. W. J. Latta, Pres.; Wm. C. Whitney, New York, and Wm. L. Elkins, Philadelphia, are at the head of the companies.

CRUISERS.—Washington, D. C.—The following bids were received Nov. 1 by the Navy Department for building six cruisers of about 3,200 tons displacement and 16½ knots speed: Moran Bros. & Co., Seattle, Wash., one vessel, department's plans, $1,122,000; Wm. R. Trigg & Co., Richmond, Va., one vessel, department's plans, $1,027,000; Same company, bidder's plans, one vessel, $1,044,000; speed guaranteed, 18 knots; two vessels, same type, $937,000 each; Same, bidder's plans, one vessel, $1,073,000; same type, two vessels, $1,027,000 each; Same, bidder's plans, guaranteed speed of 19 knots, one vessel, $1,079,000; two vessels, same type, $1,039,000; Fore River Engine Co., Braintree, Mass., one vessel, department's plans, modified, $1,065,000; two vessels, same type, $1,020,000; Same company, bidder's plans, speed of 18 knots and bunker capacity 866 tons, one vessel, $1,065,000; two vessels, same type, $1,020,000 each; Same, bidders plans, displacement 3,200 tons, speed 18½ knots, one vessel, $1,100,000; two vessels, same type, each, $1,060,800; Burlee Dry Dock Co., Port Richmond, S. I., N. Y., for department's plans, one vessel, $1,105,000; Neafie & Levy Ship & Engine Building Co., Philadelphia, department's plans, one vessel, $1,050,000; two of the same type, $1,050,000 each; Townsend & Downey, New York, one vessel, builder's plans, $1,059,000; two for $1,055,000 each; Same bidders, department's plans, one vessel, $954,500; two vessels, same type, $950,000 each; Columbian Iron Works, Baltimore, one vessel, department's plans, $1,116,000; Union Iron Works, San Francisco, one vessel, department's plans, $1,041,900; Bath Iron Works, Bath, Me., one vessel, department's plans, $1,041,650; Lewis Nixon, Elizabethport, N. J., one vessel, department's plans, $1,039,966.

CONTRACT PRICES.

SEWERS.—Alexandria, Ind.—J. S. Humphrey, Cy. Engr., writes us that the following bids were received Nov. 3 for constructing about three miles of brick and pipe sewers, as advertised in Engineering News:

Bids Received at Alexandria, Ind., Nov. 3, 1899, for Constructing Brick and Pipe Sewers.

Quantities.		Indiana Const'n Co., Terre Haute, Ind.	Wm. Bossert, Indianapolis, Ind.	King & McCray, Indianapolis, Ind.	A. Bruner, Indianapolis, Ind.	Chris. Johnson, Oshkosh, Wis.	S. J. Brandon, Alexandria, Ind.
Brick sewer, 4.7 ft. x 3.13 ft.	1,362 lin. ft.	$4.00	$3.75	$3.00	$4.20	$4.50	$5.14
Brick sewer, 3.7 ft. x 2.5 ft.	550 " "	3.00	2.85	2.45	3.60	3.50	3.50
24-in. pipe, double strength	754 " "	1.50	2.18	1.94	2.30	1.98	1.71
20-in. " " "	1,942 " "	2.00	2.21	1.65	2.30	2.20	1.65
15-in. "	794 " "	.94	.93	.78	1.00	1.00	.89
12-in. "	1,588 " "	.76	.81	.68	.70	1.00	.86
10-in. "	2,179 " "	.62	.75	.58	.60	1.00	.94
8-in. "	5,277 " "	.59	.55	.38	.50	.75	.68
6-in. "	352 " "	.48	.38	.26	.40	.60	.64
4-in. "	100 " "	.50	.26	.16½	.30	.50	.84
6-in. slants	206 each	.40	.15	.09½	.30	.50	.08
Catchbasins	6 "	40.00	35.00	25.00	40.00	30.00	12.60
Sewer inlets	18 "	60.00	12.00	10.00	20.00	20.00	14.00
4-in. drain tile	14,600 lin. ft.	.08	.09	.03	.12	.05	.05
Lampholes	20 each	15.00	7.00	9.00	10.00	10.00	8.40
Manholes	30 "	30.00	25.00	25.00	33.00	30.00	35.00
Flushtanks	7 "	70.00	50.00	60.00	80.00	65.00	42.00
Masonry	16 cu. yds.	10.00	6.00	2.00	8.00	15.00	5.60
Concrete	1 " "	10.00	1.75	2.00	6.00	3.40	1.40
Total		$23,442	$22,469	$17,457	$24,436	$25,983	$24,243
Extra timber per M. ft.		25.00	18.00	10.00	20.00	20.00	12.00

DOCK IMPROVEMENTS.—Bristol, England.—The docks committee has recommended the enlargement of the Portishead docks at a cost of about $1,750,000. T. H. Yabicom, Cy. Engr. and Surv.; D. Travers Burgess, Town Clk.; F. B. Girdlestone, Gen. Mgr. of Docks.

WHARF, HOUSE, ETC.—Boston, Mass.—Bids are asked until Nov. 11 by the Constructing Quartermaster, Fort Warren, Boston, for extending wharf, furnishing an automatic drop and constructing a storage building at Fort Strong, Boston. Capt. E. T. Brown, Fort Warren, Boston.

BEACONS.—Hawk Channel, Fla.—The following bids were opened Oct. 30 by the U. S. Engineer, Mobile, Ala., for furnishing 18 lighted beacons: Lawrence, Higgs & Co., Key West, Fla., $13,050; J. H. Gardner, Box 145, New Orleans, La., $15,732; Sinnott & Dyer, Jackson Bldg., Nashville, Tenn., $17,777.

METAL WORK.—New Haven, Conn.—Bids are asked until Nov. 13 for furnishing the metal work for the New Haven long wharf light station, as stated in our advertising columns. Plans and specifications are on file at the office of Engineering News, 220 Broadway, New York. Lieut.-Col. D. P. Heap, U. S. Engr., Tompkinsville, S. I.

TIMBER.—Chicago, Ill.—Reports state that a $20,000,000 lumber, iron and transportation company, to be called the Ontario & Lake Superior Co., is being organized by the same capitalists who organized the Consolidated Lake Superior Co.; also that these two companies are to be allied. The former is to control the Algoma Commercial Co. and the Algoma Central Ry.

LIGHT-HOUSE REPAIRS.—Romer Shoal, N. Y.—The following bids were opened Oct. 31 in the Engineer's office, Tompkinsville, N. Y., for constructing a main gallery at Romer Shoal Light Station: Wm. H. Flaherty, Brooklyn, $1,475; Dennis Toomey, Guilford, Conn., $2,300; E. C. Moore, 130 Pearl St., New York, $2,450; Central Contracting Co., 99 Cedar St., New York, $2,700.

ELEVATORS.—Brooklyn, N. Y.—The Brooklyn Rapid Transit Co. is reported to have placed the contract for building an elevator in the station at 65th St. and 3d Ave., and that others will be erected in a short time. The

SEWERAGE SYSTEM.—Wellsville, O.—T. J. Forner, Clk., informs us that the following lowest bids were received Oct. 30, 1899, for furnishing the materials and for constructing a system, as advertised in Engineering News; Irwin Bros. awarded contract; Riggs & Sherman, Engrs., Toledo, O.:

Quantities.		Ott Bros., Pittsburg, Pa.	Irwin Bros. Greenville, O.
Sewer: 10-in. pipe	5,970 lin. ft.	$0.69	$0.50
24-in. pipe & stone*	500 " "	1.25	1.00
12-in. "	3,760 " "	.70	.83
8-in. pipe	40,210 " "	.48	.45
15-in. "	585 " "	.60	.70
18-in. "	3,355 " "	1.07	1.10
20-in. "†	2,495 " "	2.35	2.50
24-in. "†	1,550 " "	4.30	3.40
42-in. brick	400 " "	3.65	3.00
Special Manhole	1	65.00	100.00
Iron pipe	82.5 tons	38.00	50.00
Rock	1,000 cu. yds.	.25	.50
6-in. sub-drain		.32	.50
4-in. sub-drain		.30	.40
4-in. house connect'ns		.37	.40
Flushing inlet	1	60.00	350.00
8-in. flushtanks	1	55.00	65.00
6-in. flushtanks	35 each	55.00	55.00
Lampholes	46 "	6.00	7.00
Drop manholes	10 "	50.00	75.00
Standard manholes	162 "	65.00	40.00
Total		$56,531	$56,110

Average cut: *6 ft., and where not noted the cut is 9½ ft.; material, clay. †Average cut 24 ft.

DREDGING AND JETTY WORK.—Wilmington, Del.—Gen. Wm. F. Smith, U. S. Agent, received the following bids Oct. 19, 1899, for dredging in Wilmington Harbor and Christiana River, Del., for constructing jetties at the mouth of the Brandywine and south side of the Christiana rivers, and repairing and extending north jetty and construction of crib, as advertised in Eng. News; (1) being for north jetty with crib (stone base), (a) repairs, (b) extension,

(c) crib, (d) crib on stiff mud, (e) time to commence, (f) time to complete; (2) south jetty, (a) jetty per lin. ft., (b) cross dike a lin. ft., (c) time to commence, (d) time to complete; (3) Brandywine jetty, (a) work complete, (b) time to commence, (c) time to complete; (4) dredging, (a) a cu. yd. in place, (b) time to commence, (c) time to complete: B. F. Sweeten & Son, Camden, N. J., (1a)$4,236, (b) $16,250, (c) $8,390, (d) $15,000, (e) 60 days, (f) 120 days; (2a) $19.46 a ft., (b) $3.34 a ft., total, $34,147; (c) 60 days, (d) 120 days; (3a) $7,534, (b) 60 days, (c) 120 days. Delaware Construction Co., Wilmington, Del., (1a) $1,083, (b) $16,911, (c) $7,000, (d) $16,000, (e) 10 days; (2a) $23.10, (b) $5.98, total $42,000, (c) 10 days, (d) 180 days; (3a) $9,000, (b) 10 days, (c) 100 days. American Dredging Co., Philadelphia, Pa., (4a) 11.4 cts., (b) March 1, 1900, (c) June 30, 1901. Frank Pidgeon, Saugerties, N. Y., (1a) $5,500, (b) $20,800, (c) $8,300, (d) $7,900, (e) 30 days, (f) October, 1900; (2a) $24.35, (b) $7, total $45,029, (c) 30 days, (d) October, 1900. Philadelphia Construction Co.,Philadelphia (2a) $30.36, (b) $4.28, total $51,000, (c) 30 days, (d) 300 days; (3a) $16,000, (b) 30 days, (c) 180 days; Bowers Hydraulic Dredging Co., Camden, N. J., (4a) 10⅞ cts., recommended for acceptance. Atlantic, Gulf & Pacific Co., (4a) 13.8 cts., (b) 100 days, (c) as required by specifications, which require not less than 4,000 yds. a day. Benj. T. Collins, Milford, Del. (2a) $20, (b) $3.60, total $33,512, recommended for acceptance; (3a) $7,311, (b) 60 days, (c) 120 days, recommended for acceptance. American Artificial Stone Pavement & Construction Co., Philadelphia, (2a) $20.25, (b) $3, total $43,000, (c) 30 days, (d) 150 days; (3a) $9,500, (b) 30 days, (c) 100 days. Frank K. Wills, Wilmington, (3a) $8,203, (b) 30 days, (c) 75 days. Sanford & Brooks, Baltimore, Md., (1a) $4,500, (b) $20,700, (c) $5,900, (d) $7,000, recommended for acceptance, (e) 30 days, (f) 200 days, (2a) $20.50, (b) $2.20, total $33,632, (c) 30 days, (d) 200 days; (3a) $7,900, (b) 30 days, (c) 200 days. P. Sanford Ross, Inc., Jersey City, N. J., (1a) $8,000, (b) $18,100, (c) $11,675, (e) April 1, 1900, (f) June 30, 1901; (2a) $20.45, (b) $2.80, total $34,328, (c) April 1, 1900, (d) June 30, 1901; (3a) $6,900, (b) April, 1900, (c) June 30, 1901. The Ross bids are on contingent on acceptance of all three. The aggregate of the lowest bids, as recommended, is about $140,000. No. 1 consists of 1,515 lin. ft. of pile and stone jetty; No. 2 about 1,110 ft. of cross dike, about 300 ft. of extension and a crib at end, with coures of 12x12 timber, with internal bracing of the same size, and filled with stone; No. 3, about 500 lin. ft. of pile and stone jetty, and No. 4 is estimated to consist of about 900,000 cu. yds. of dredging in the Christiana River to a depth of 21 to 10 ft. at mean low water at different points.

PAVING.—New York, N. Y.—The department of parks received the following bids Nov. 2 for grading and paving in Bronx Park; all local bidders:

Bids Received at New York, N. Y., Nov. 2, 1899, for Grading and Paving in Bronx Park.

Quantities.		George Clark, 4225 3d Ave.	J. Thielmann, 303 West 93d St.	A. E. Olmstead, New York.	John B. Devlin, near Webster Ave.	Bart Dunn, 321 East 68th St.	Chas. W. Collins, 1088 Brook Ave.
Earth excavation	2,400 cu. yds.	$0.35	$0.25	$1.40	$0.35	$0.30	$0.40
Rock excavation	1,100 " "	1.50	2.00	1.00	.90	1.50	1.25
Filling	6,300 " "	.40	.25	.40	.40	.30	.40
Surface basins	11 each...	6.00	35.00	50.00	30.00	35.00	30.00
8-in. vitrified drain pipe	1,100 lin. ft..	1.50	.40	.60	.28	.35	1.00
12-in. " "	780 " "	2.00	.80	1.00	.50	.50	1.25
15-in. " "	550 " "	3.00	1.20	3.00	.90	1.00	1.50
Telford macadam pavement	16,300 sq. yds.	1.20	1.15	1.25	.83	1.05	.90
Total		$29,460	$25,229	$30,995	$19,412	$23,085	$22,725

BREAKWATER.—Sheboygan Harbor, Wis.—Capt. J. G. Warren, U. S. Engr., Milwaukee, Wis., received the following bids Oct. 24, 1899,for constructing 700 lin.ft. of crib breakwater at Sheboygan Harbor, as advertised in Engineering News; the total bids of all except Christie, Lowe & Heyworth call for white pine—their bid is for Norway pine:

Quantities.	Adolph Green, Green Bay, Wis.	Powell & Mitchell, Marquette, Mich.	Christie, Lowe & Heyworth, Chicago.	Edward Gillen, Racine, Wis.
Timber:				
W. pine ..912,000 ft. B.M.	$31.50	$30.00	.....	$27.00
Norw'y pn.912,000 " "	29.50	25.00	$39.31	27.00
Hemlock .588,000 " "	21.00	20.00	26.41	22.50
Pine plank.. 6,000 " "	26.00	25.00	31.90	21.00
Wrought-iron:				
Drift bolts.111,000 lbs.....	.04	.04	.045	.035
Screw bolts 2,500 "	.04	.045	.04	.04
Spikes .... 3,500 "	.04	.045	.04	.04
Stone ..... 5,700 cords...	6.75	8.00	6.59	5.75
Fndatn piles. 441 each...	11.60	22.00	15.25	12.00
Total	$89,583	$99,377	$101174	$80,252

SEWERS.—Warsaw, Ind.—W. Y. Chamberlain, Cy.Engr., informs us that the following bids were received Nov. 3 for constructing sewers, as advertised in Engineering News; contract awarded E. Woods & Co.:

Bids Received at Warsaw, Ind.,Nov. 3, 1899, for Constructing Sewers.

Quantities.		E. Woods & Co., Decatur, Ind.	Derheimer & Co., Ft.Wayne, Ind.	Kinkaid & Ammann, Decatur, Ill.	O'Brien & DeHasty, Elwood, Ind.	Indiana Const'n Co. TerreHaute Ind.
48-in. brick sewer, 2-ring	2,448 lin. ft..	$2.75	$3.35	$3.45	$4.50	$4.50
32 x 48-in. brick sewer, 2-ring	731 " "	2.50	2.83	3.20	3.75	3.00
23 x 42-in. brick sewer, 2-ring	1,098 " "	2.30	2.52	2.85	2.80	2.90
24 x 36-in. brick sewer	708 " "	2.10	2.11	2.50	2.30	2.80
24-in. pipe sewer	4,966 " "	1.25	1.38	2.25	1.53	1.90
20-in. " "	150 " "	1.05	1.32	1.35	1.40	1.60
18-in. " "	1,181 " "	.72	.84	1.15	1.30	1.25
15-in. " "	1,243 " "	.70	.83	.95	.90	1.10
12-in. " "	1,376 " "	.55	.61	.80	.80	1.10
10-in. " "	1,390 " "	.60	.57	.75	.70	1.00
9-in. " "	1,878 " "	.57	.61	.70	.50	.95
8-in. " "	885 " "	.55	.37	.58	.50	.58
6-in. " "	3,045 " "	.35	.31	.50	.50	.56
Manholes, 3 ft. diameter	4 each...	.29	23.00	22.00	30.00	30.00
" 4 " "	30 " ...	20.00	23.00	27.00	35.00	35.00
" 4 " " with drop conns	6 " ...	20.00	25.00	28.00	25.00	40.00
" 4 x 2½ ft. diameter	27 " ...	23.00	21.00	18.00	25.00	35.00
Inlets	59 " ...	10.00	15.00	7.00	10.00	30.00
Catchbasins	27 " ...	20.00	23.00	20.00	15.00	30.00
Flushtanks	3 " ...	30.00	28.00	26.00	35.00	70.00
Flush well	1.....	20.00	35.00	27.00	10.00	100.00
Total		$28,761	$32,472	$39,645	$39,586	$45,406

EXTENDING WATER TUNNEL.—Santa Barbara, Cal.—We are informed that the following bids were received Oct. 25, 1899, for extending the water tunnel 500 ft.: McDonald & Co., Los Angeles, Cal., $12.50 per lin. ft; R. Smitheram, Santa Barbara, $13.75; Mike Strupelli, Santa Barbara, $12.50; E. J. Hunt, Santa Barbara, $10.75.

INDUSTRIAL NOTES.

THE NEW BRITAIN MACHINE CO., New Britain, Conn., has an order for 22 high-speed Case engines for shipment to Kent, England.

THE SNIDER-HUGHES CO., Cleveland, has an order for 47 steam pumps, 20 of which are to be shipped to Shanghai and 27 to Hong Kong.

P. H. HARRISON & SONS, contractors and engineers, have removed their office from 220 Broadway, New York, to 745 Broad St., Newark, N. J.

THE UNION BOILER-TUBE CLEANER CO., 263 Penn Ave., Pittsburg, has completed a contract for cleaning two Hazelton or Porcupine boilers having over 2,000 tubes, one end of which is welded tight. These tubes were badly scaled and the closed end required a special tool of unique design, as well as the use of their own design of flexible shaft.

THE PITTSBURG STEEL FOUNDRY CO., Pittsburg, says a local paper, began making steel castings at its large plant at Glassport Nov. 2. The plant has facilities for supplying armor and ordnance castings, and a number of orders for this class of work are said to be on hand. The fuel for the furnaces will be gas, manufactured by the Pittsburg Coal & Coke Co. under the Otto Hoffman process at Glassport.

THE H. K. PORTER CO., 531 Wood St., Pittsburg, is said to be building a little engine for 18-in. gage, having cylinders 6 x 10 ins., for the French Rand Gold Mining Co., Johannesburg, South Africa, and has just shipped a 7 x 12-in. locomotive for 30-in. gage to Japan. A 11 x 14-in. consolidation locomotive has been shipped to Russia to run on track with a gage of 29½ ins.

THE ACME MACHINERY CO., Hamilton and Belden Sts., Cleveland, manufacturer of automatic bolt cutters, bolt and rivet headers, etc., has just completed and occupied a 2-story fireproof extension, 50 x 140 ft., which will be used as a machine shop. The building is of brick and iron, and is constructed on the slow-burning principle throughout. The extension will require the employment of about 60 extra workmen. The company reports good business in all departments.

RUSSELL & CO., Massillon, O., manufacturers of steam road rollers, portable and stationary engines, etc., are building an extension, 65 x 80 ft., to their foundry. The building is of brick and stone, and is traversed by an electric crane of 30 ft. span. A warehouse, 80 x 400 ft., two stories in height, is also under construction to replace the one which was recently destroyed by fire. The company reports an unusually good business in all departments.

THE LIDGERWOOD MFG. CO., New York, are to have their device for coaling vessels at sea given a practical test by the navy department. The collier "Marcellus" and war ship "Massachusetts," now at New York, have been selected for this purpose and the trials at sea will be made within a week or so.

THE LACKAWANNA IRON & STEEL CO., Scranton, Pa., has called a meeting of the stockholders for Dec. 29, says a press report, to vote on a proposition to increase the capital stock of the company from $3,500,000 to $25,000,000. This is one of the steps in the direction of establishing a large steel rail and billet plant at Buffalo, planning for which has been in progress for upward of a year. It is understood that the actual work of construction will begin early next year.

THE AMERICAN STEEL & WIRE CO., Chicago, announces regarding the partial destruction by fire of its plant at Waukegan, Ill., Nov. 4, that the fire affected particularly the finishing end of the plant, the rolling mill not being damaged in any respect. The warehouse, with a fair stock of goods, was also saved. The company has already made arrangements for the execution by its other plants of unfilled orders at Waukegan, and desires to assure the public that all orders placed at Waukegan for shipment will be taken care of by shipment from other plants with very little, if any, delay.

NEW COMPANIES.—Wood Fireproofing Co., East Orange, N. J.; $200,000; Harry H. Picking, Oscar L. Lefferts.

Cholame Oil Co., Hanford, Cal.; $250,000; N. Welsbaum, R. Mills, Hanford; J. W. Fisher, Parkfield.

Hidden Treasure Oil Co., San Francisco, Cal.; $100,000; Geo. C. Higgins, G. H. Waggoner, H. F. Peart.

Pennsylvania Consolidaetd Oil Co., San Francisco, Cal.; $500,000; J. H. Dieckmann, Jas. Simon, E. F. Beck.

Excelsior Oil Co., San Francisco, Cal.; $100,000; G. W. Merritt, C. H. Phillips, E. Lewis.

California Mutual Oil Co., San Francisco, Cal.; $500,000; W. H. Busch, E. E. Potter, W. S. Pardy.

Midon Oil & Developing Co., San Francisco, Cal.; $500,000; Frank Midon, Chas. Guillet, W. C. McPherson.

Commonwealth Oil Co., Stockton, Cal.; $10,000; H. N. Hammore, San Francisco; John Doyle, A. B. Hopkins.

Ferndale Petroleum Oil & Developing Co., Oakland, Cal.; $100,000; A. C. Dietz, C. H. Cushing, Frank Buch.

Equitable Oil Co., San Francisco, Cal.; $500,000; J. H. Sayre, L. Bowles, M. A. C. Christensen.

Argonaut Oil Co., San Francisco, Cal.; $300,000; Jas. Hamilton, H. S. Smith, L. L. Long.

The Westlake-Rommel Oil Co., Los Angeles, Cal.; $250,000; H. W. Westlake, J. Rommel, B. M. Marble.

Golden Gate Oil Producing Co., Stockton, Cal.; $100,000; S. E. Lotta, W. J. Rhodes.

Victory Oil Co., San Francisco, Cal.; $100,000; subscribed, $25; Millet B. Lee, William A. Deane, William H. Fowler.

Holtin Chemical Co., Port Richmond, N. Y.; proprietary medicines; $250,000; M. E. Holtin, Hoboken, N. J.; C. B. Frazier, J. E. Peck, New York city.

Caspian Oil Co., Fresno, Cal.; $100,000; C. A. Canfield.

North Field Oil Co., Fresno, Cal.; $200,000; I. F. Poston, Pres.; A. B. Smith, Fresno, Vice-Pres.; T. J. Egan.

Atlantic City & Chelsea Improvement Co., Atlantic City, N. J.; $2,500,000; W. J. Jackson, Philadelphia; A. Thompson Dukes, Camden, N. J.

Imperial Construction Co., 227 Market St., Camden, N. J.; $100,000; S. Stanger Izzard, Robert J. McDougal.

United Mine Transportation Co., Victor, Colo.; to construct an underground railway; W. Woods, H. E. Woods.

Worcester Liquid Air Co., Kittery, Me.; $500,000; C. C. Corbett, Boston; E. A. Corbett, Providence, R. I.

Safety Brake & Coater Co., Dover, Del.; $250,000; Essex safety brakes; John L. Burt, New York; James Virdin.

Economic Smoke Consumer & Fuel Saving Furnace Co., Chicago; $100,000; W. R. Stuart, W. F. Singer.

General Electro-Chemical Co., Ampere, N. J.; $100,000; Edwin S. Webster, W. Cameron Forbes, Boston; Chas. S. Bradley, New York.

National Foundry Co., Hoboken, N. J.; $250,000; Henry H. Vanderbilt, Hoboken; Nelson Adams, Brooklyn, N. Y.

Vermont Construction Co., New Haven, Conn.; $25,000; to construct and build street railways; C. W. Blakeslee.

Pacific Wrecking & Salvage Co., Seattle, Wash.; $15,000; R. Winsor, E. A. Kelley.

Scholfield Gear & Pulley Co., Providence, R. I.; $50,000; W. H. Perry, Warwick, R. I.; J. J. Scholfield, Providence.

Ohio Valley Mill & Milling Co., Toplin, Mo.; $200,000; H. J. Mendell, Wheeling, W. Va.; E. M. Statler, Buffalo.

Queen City Mining & Mfg. Co., Cincinnati, O.; $1,000,000; J. J. Sullivan, J. F. Partie.

Manhattan Rolling Mill, New York; $20,000; J. Leonard, Montclair, N. J.; Michael Blake, Orange, N. J.

Delaware Engineering Co., Dover, Del.; $100,000; to construct and equip electric railways; W. W. Power.

Sterling Lubricator Co., Rochester, N. Y; $20,000; J. Sherry, G. W. Davidson.

Ringgold Cement Co., Camden, N. J.; $500,000; Abram Focht, Joseph C. Cramp.

Canadian Electro Chemical Ore Production Co., East Orange, N. J; $3,000,000; Duncan T. McLaren, Harry H. Picking.

Manning Signal Lamp Co., Des Moines, Ia; $150,000; L. Drakeley, W. D. Sheehan.

Eldora Pipe & Tile Co., Eldora, Ia.; $35,000; C. A. Ranson, Des Moines; C. A. Ream, Eldora.

Hartford Accumulator Co., Hartford, Conn.; $1,800; to make, buy and sell vehicles propelled by electricity; H. B. Philbrick, F. W. Barkoff.

American Automobile Co., Dover, Del.; $100,000; C. H. Mullen, Mount Holly Springs, Pa.; G. W. Kimball, Wilmington, Del.

Pittsburg Steel Shafting Co., Rankin, Pa.; $100,000; T. W. Fitch, Jr., J. P. Fleming, Pittsburg.

Norristown Iron Co., Norristown, Pa.; $200,000; H. H. Light, Lebanon, Pa.; J. G. Vogler, Philadelphia.

Continental Automobile Co., Trenton, N. J.; $8,000,000; Julius M. Ferguson, Michel P. Caffey, New York.

Keystone Boiler & Radiator Co., Camden, N. J.; $400,000; H. Clay Chisholm, Frank R. Hansell.

Allen Granite & Construction Co., Netcong, N. J.; $25,000; T. J. Allen, Netcong; Hugh L. Russell, Stanhope.

New York Shipbuilding Co., Camden, N. J.; $3,000,000; Henry G. Morse, Woodbury, N. J.; Wm. J. Rundle, Chester, Pa.; Charles G. Hall, Wilmington, Del.

Ozark Zinc & Lead Mining Co., Council Bluffs, Ia.; $200,000; H. C. Cory, C. W. Busnell.

Cape Horn Mining & Trading Co., Seattle, Wash.; $1,000,000; C. A. Riddle, J. Isaacs, G. W. Yancy.

Safety Train Order Signal Co., Corporation Trust Co.'s Building., Jersey City, N. J.; $250,000; Frank B. Drake.

English Automobile & Motor Co., Chicago, Ill.; $5,000,000; P. English, Benton Harbor, Mich.; T. M. Moe, Chicago.

Arimex Consolidated Copper Co., Jersey City; $5,000,000; Charles N. King, John J. Mulvaney, Jersey City.

Omega Portland Cement Co., Jonesville, Mich.; $300,000; S. B. Collins, of Jackson, Mich.; C. F. Wade, Jonesville, Mich.

Detroit Automobile Co., Detriot, Mich.; $150,000; F. J. Hecker, P. A. Ducey, C. A. Black.

Acetylene Apparatus Co., Portland, Me.; $150,000; J. H. Hall, East Greenwich, R. I.; A. J. Desmond, Portland; E. S. Babbitt, Bristol, R. I.

Southern Electro-Chemical Co., Baltimore, Md.; $1,000,000; R. M. Glacken, O. J. Fisher.

Philadelphia Motor Carriage Co., Philadelphia; $1,000,000; C. P. King; Claude S. Jarvies, Grafton, W. Va.

Northwestern Power & Transportation Co., 103 E. Front St., Plainfield, N. J.; $500,000; Francis A. Cokefair.

National Water Tube Boiler Co., No. 30 New St., New Brunswick, N. J.; $100,000; Louis Wolfson, Charles Howell.

Lancaster Motor Co., Trenton, N. J.; $5,000,000; Percy C. Hamilton, Pittsburg, Pa.; Joseph V. Clark, Jersey City.

Pittsburg Steel Hoop Co., Pittsburg, Pa.; $150,000; E. Winter, W. C. Reitz, W. F. McCook.

Electro-Gas Lighting Co., Hinton, W. Va.; $100,000; T. C. Briscoe, of Charleston, N. C.; R. R. Thompson.

Manning Improved Rail Co., Jersey City, N. J.; $100,000; Wm. B. Greeley, New Rochelle, N. Y.; Lindley M. Garrison, Jersey City, N. J.

International Burglar-Proof Sash Balance & Lock Co., Providence, R. I.; $100,000; B. M. Lovell, A. B. Harmon.

Randolph-Clewes Co., Corporation Trust Co.'s Bldg., Jersey City, N. J.; $900,000; Samuel P. Williams, Waterbury, Conn.; Edward C. Bates, Boston.

Richardson & Ross Asphalt Paving Co., N. J. Corporation Guarantee & Trust Co. Bldg, Camden, N. J.; $200,000; Geo. B. Martin.

Victor Oil Co., San Francisco, Cal.; $500,000; C. Bone.

Star Oil Co., Bakersfield, Cal.; $500,000; R. S. Elwood.

Oceanic Oil & Fuel Co., Hanford, Cal.; $200,000; P. McRae, Fred. Foster, J. W. Barbour.

Florence Oil Development & Exploiting Co., Tucson, Ariz.; $150,000; D. Mayer, F. Macpherson, J. Jenkin.

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